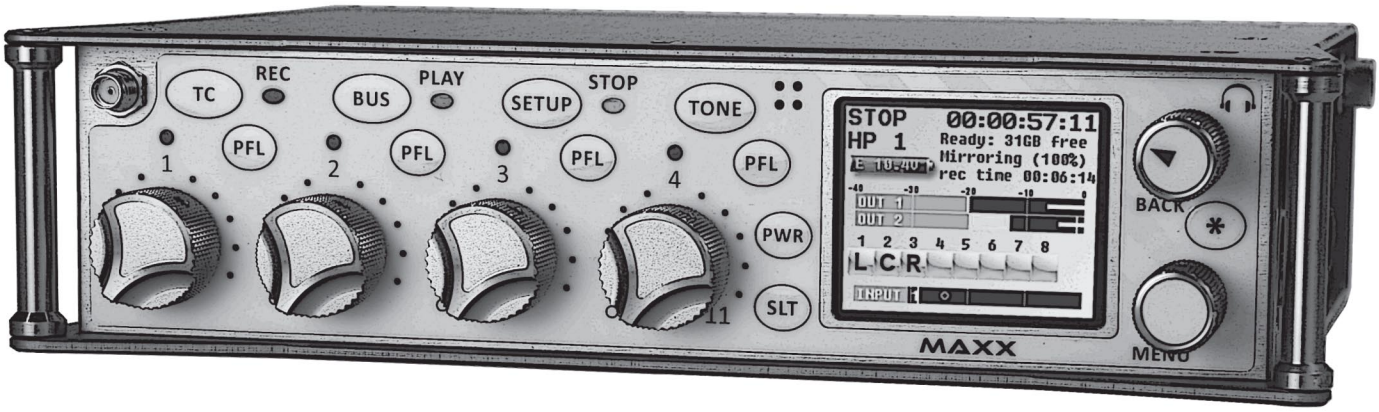
# User's Manual

# MAXX




## *Mixer / Recorder / Transmitter*

Firmware Version: v2.0
Release Date: December 2013

**NOTE: All specifications in this manual are subject to change without notice.**

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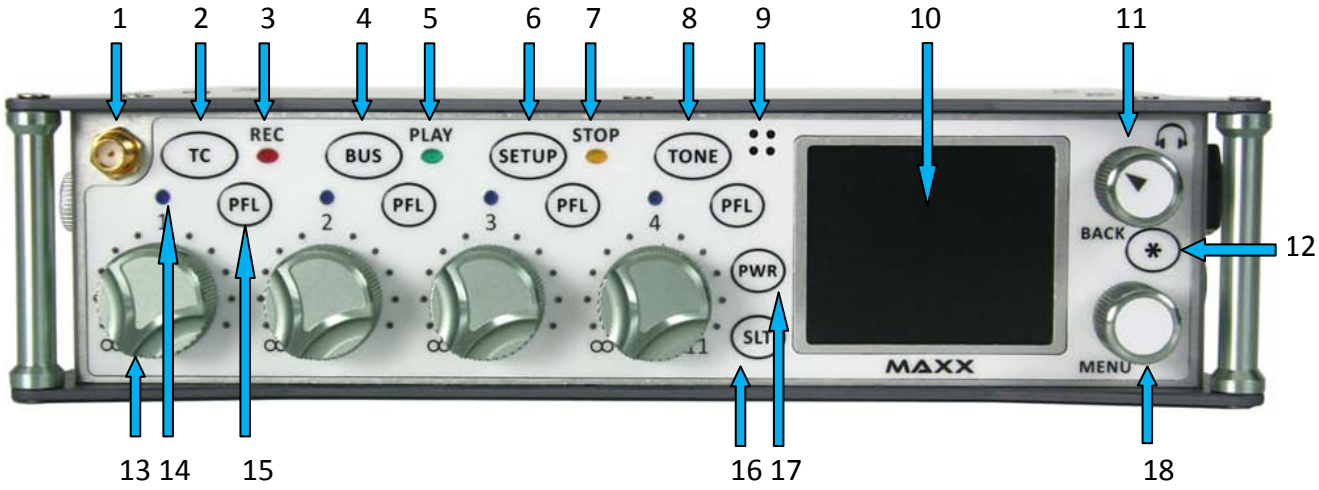
# Know Your Maxx

## Front Panel




1. **Wireless Camera Link Antenna -**SMA
2. **TC / REC Key**
   - A single short press once opens the **Visual Time Code Slate**.
   - Additional presses accesses the **Time Code** menus.
   - Press and hold for one second, puts the Maxx into **Record**.
   - When in setup menu press it to access the analog input 1 setup menu.
3. **Record LED**
   Indicates Maxx is in Record mode.
   In the **Warning Setup Menu** Maxx can be set up that if you are recording just to the primary folder the LED will flash red, and when Maxx is mirroring the LED will go to solid red. This is to warn the user that Maxx is not in **Continuous Mirror Mode**.
4. **BUS /PLAY key**
   - When in the ENG Home Page a single short press allows you to adjust the **Quick Pan Matrix**.
   - A second press or a press from any other Home page takes you into the **Bus Routing** menu.
   - Pressed and hold for one second, puts Maxx into **Playback** mode.
   - When in setup menu press it to access the analog input 2 setup menu.
5. **Play LED**
   Indicates Maxx is in Playback mode.
6. **SETUP / STOP Key**
   - A single short press opens the **Analog Input Setup** menu.
   - Press and hold for one second while in record mode, or playback mode, stops Maxx.
   - When in setup menu press it to access the analog input 3 setup menu.
7. **STOP LED**
   Indicates Maxx is in Stop mode.
8. **TONE Key**
   - Press to toggle **Tone** on and off.
   - When in setup menu press it to access the analog input 4 setup menu.
9. **Internal Slate Microphone**
10. **Color LCD Screen**
    Daylight-readable color LCD screen.

11. **HEADPHONE Knob / BACK Knob**
    - Press it to back out of a menu to the previous menu.
    - Turn it to adjust headphone volume.
    - Press and hold will enter user inputted data.
12. **Star key**
    - From the any **Home page**, it advances to the next **Home page**.
    - In the **Bus Routing** matrix and **Card Mix** matrix if pressed it you will add phase reverse to your cross point options.
    - In the **Fader Assign** matrix if pressed it will add trim to your cross point options.
    - If pressed and held while powering-up, Maxx will look for new software and start the update process.
13. **Fader 1 (4 total)**
    Each of four faders can be assigned to any channel or combination of channels, or act as a hardware trim knob.
14. **Auto-Trim™ LED (4 total)**
    Indicates which fader is active for AutoTrim™.
15. **Pre Fader Listen key**
    - Press to listen to Pre Fader audio from the corresponding fader.
    - When in setup mode press to access the AES input setup menu for the corresponding AES inputs.
    - Pressing from the Meta Data menu or Track Naming menu will open the list of presets.
16. **SLT key**
    - Press and hold it to activate the Slate mic.
17. **Power Key**
    - A quick press will power up Maxx.
    - Press and hold for 3 seconds to power down Maxx. Release the key when the countdown reaches 1.
    - When Auto-Pan is ON the power key will change the panning for the active channel.
18. **MENU knob / SHIFT key**
    - From the **Home page** press it to access the **Main Menu page**.
      **NOTE:** From the **AES Virtual Fader** meter screen or from the **ENG** meter screen you have to push and hold to access the **Main Menu**.
    - Turn it to scroll through the items in a menu.
    - Press to select a menu item.

**SHORTCUT:** While scrolling through a parameter with a long list, pressing the **MENU** knob while turning it will speed up the scroll speed by 10 times.

## Left Side

1. **Battery Door**
   The Silver knob rotates clockwise to lock the battery compartment door. Inside, you will find space for the battery carrier with six AA batteries.

   **NOTE:** It is possible to insert the battery carrier incorrectly. Even if you insert with the contacts reversed it will do NO harm to the unit because there is reversed current protection. It just won't turn on.

   **WARNING:** Use **ONLY** NiMH rechargeable or Lithium batteries. If you use ANY other batteries, they will EXPLODE and can SEVERLY damage or DESTROY the unit.

2. **AES Input Output connector / GPI (DE-15F)**
   Maxx has AES 2 input pairs and 3 AES output pairs. The Input has a sample-rate conversion, allowing each input to have a different sampling-rate. Maxx will accept any unlocked AES signal with a sampling-rate of 44.1 to 96 kHz. The dynamic range of the sample-rate conversion is 124 dB, offering completely transparent conversion of digital audio from one sample-rate to another.

3. **Timecode Input / Output connector (BNC) -** the function of this connector is set in the **Time Code Setup** menu.

4. **Compact Flash Card Mirror Media Slot**
   Compact Flash card is inserted with the top of the card (Label side) facing down**.**

   **WARNING:** Take your time when inserting a card in Maxx. The card should slide in easily. If there is any resistance required the card is not aligned correctly and can bend the pins.

## Right Side

1. **Headphone (1/4" stereo jack)**
2. **External Power connector (Hirose- HR10A-7P-4P)**
   10 to 18 VDC {1/2 A @ 12 VDC}
3. **Tape / Mono Out (TA-5M)**
   Outputs both the Tape and Mono Out busses. The tape and mono out are both balanced mono sources. The audio that is fed to these busses are controlled from the Mono / Tape bus matrix.
4. **Output Bus 1/2 (TA-5M)**
   This is an isolated copy of the XLR bus outputs. Levels are independently adjustable.
5. **Return / Line Level Inputs for analog in 5 and 6 (TA-5M)**
   - This is where a camera returns are connected. The return is wired to accept two channels of audio so it can receive one stereo return from one camera or two mono returns from two cameras.
   - This input can be used as line level analog input 5 and 6.
6. **Output Bus 1/2 (XLR)**
   Main XLR output. Levels are independently adjustable.

## Rear

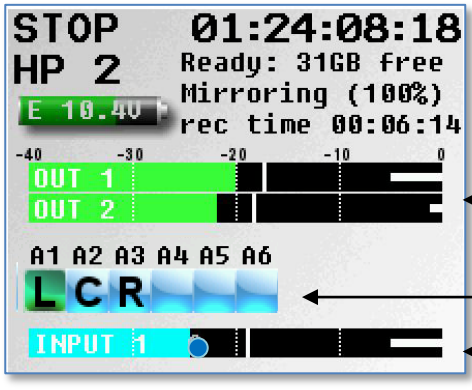
1. **Mic/Line-level Inputs 3 and 4 (Combo  XLR-3F  1/4" Stereo )**
2. **Mic/Line-level Inputs 1 and 2 (XLR-3F)**

## Home Screen / Meters

There are several selectable Home meter screens from which to choose. You can toggle through the different pages by pressing the **Star** key.
The color of the left half of the meter indicates the source type being metered:

- Light blue for an analog input
- Darker blue for an AES input
- Green for an output bus
- Purple for a recorded track

The track name is indicated within the meter itself to aid in channel identification. If a compressor is engaged, a white gain reduction indication will appear at the right side of the meter if the compression threshold has been exceeded.

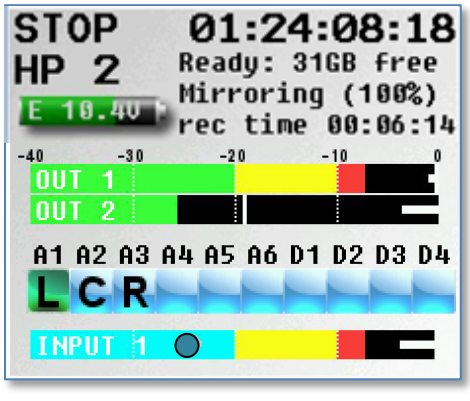



Output busses 1 and 2

ENG Quick Pan Matrix

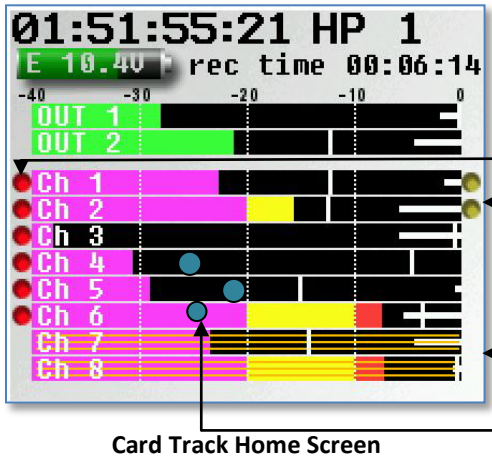
AutoTrim™ Meter
See ***ENG / EFP Bag Operation***

**ENG Home Screen**




ENG Quick Pan Matrix with AES Inputs

**ENG Home Screen**
**Only on Maxx with AES Option**



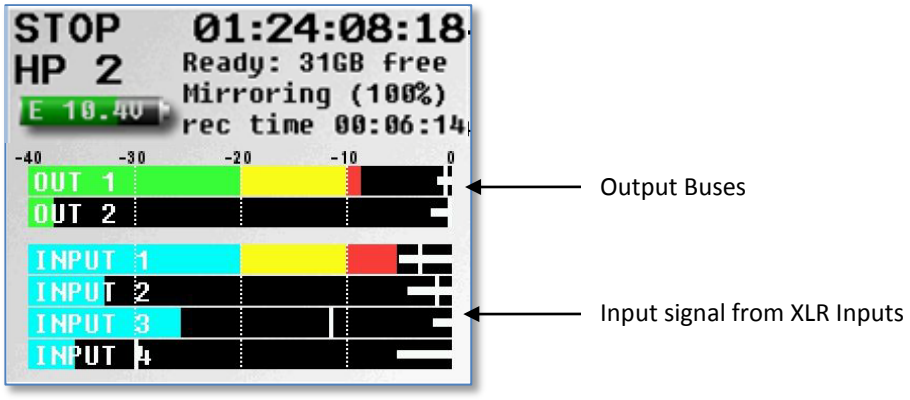

Red Record Enabled Indicators – Show which tracks will be recorded

Yellow ISO Attenuation Enabled Indicators - Shows which ISO tracks will be attenuated
See ***ENG / EFP Bag Operation***

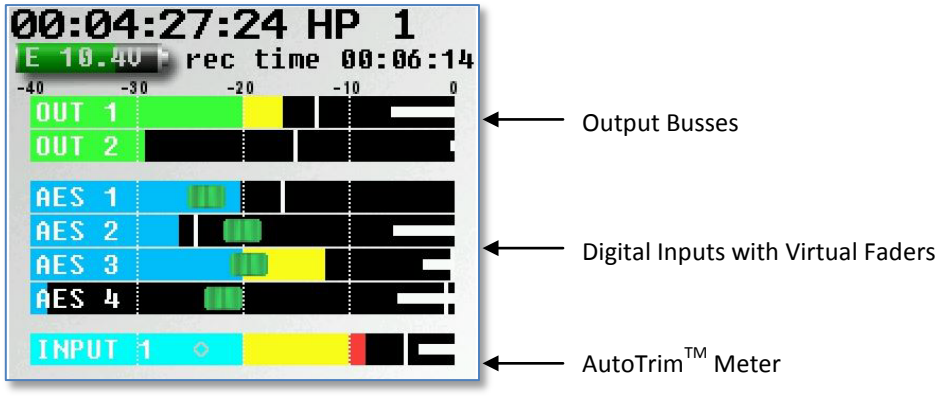
Yellow Strike Through – Represents that these tracks will not be recorded

Blue Trim indicators

**Card Track Home Screen**

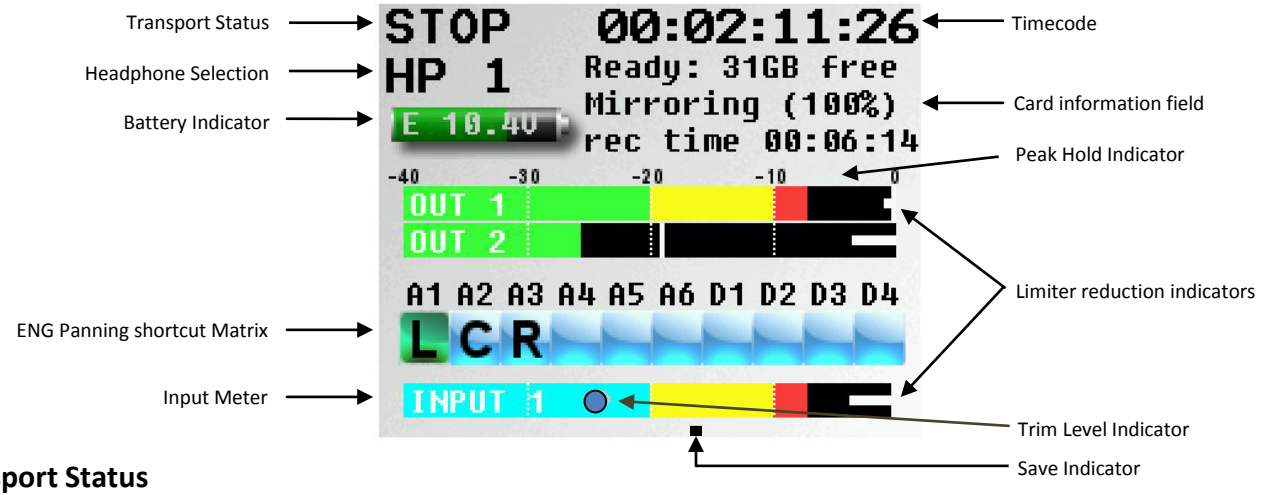



**Input Meter Screen**




**Digital Input Virtual Fader Screen**
**Only on Maxx with AES Option**

## Home Screen Explained




### Transport Status

Displays the current mode **RECORD**, **PLAY** or **STOP**.

### Timecode

Displays the current time code. The time code setup menu will determine if this will display the time code generator or the time code from the card playback.

### Headphone Selection

Displays which headphone selection you are monitoring.

- Once the **PFL** key is pressed, the name in the Headphone Monitor field is replaced with **PFL** alternating with the selected channel number(s) as follows:

- Press the corresponding PFL key to select a channel to listen to. If you want to listen to multiple channels at the same time, just press and hold an additional PFL key for approximately 1 second to add that channel to the PFL circuit.
- Press the **HEADPHONE** knob to restore normal headphone monitoring.

### Battery Status Indicator

Displays the power source (**I** - Internal / **E** - External), and a numeric display of the current voltage.

### Save Indicator

A moving pixel on bottom of screen moving right to left indicates that the Maxx is saving a parameter setting to Maxx's ROM memory. If you power down while the pixel is moving the settings will not be saved.

### Card Information Field

#### Top Line - Mirror Free Space

Displays available Mirror space

#### Second Line - Mirror File Progress

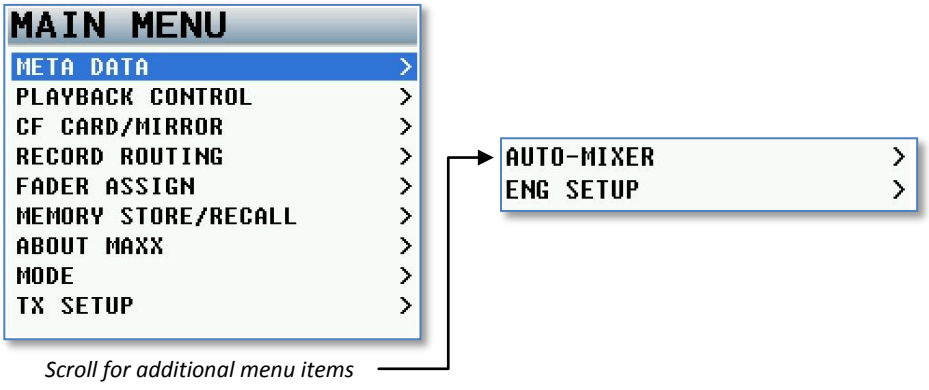
Displays what percentage of mirroring is left

#### Third Line

Time left on the Primary Folder

# Main Menu

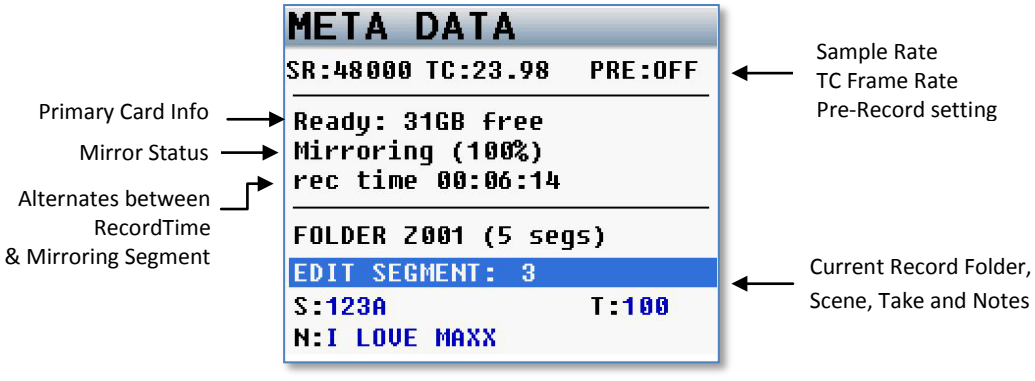
To access the **Main Menu** press the **MENU** knob.




**NOTE**: If you are in the **Virtual Fader Screen** or the **ENG** Screen and have the Virtual Fader enabled you have to press and hold the **MENU** knob for 1 second to enter the **Main Menu**.

# Meta Data

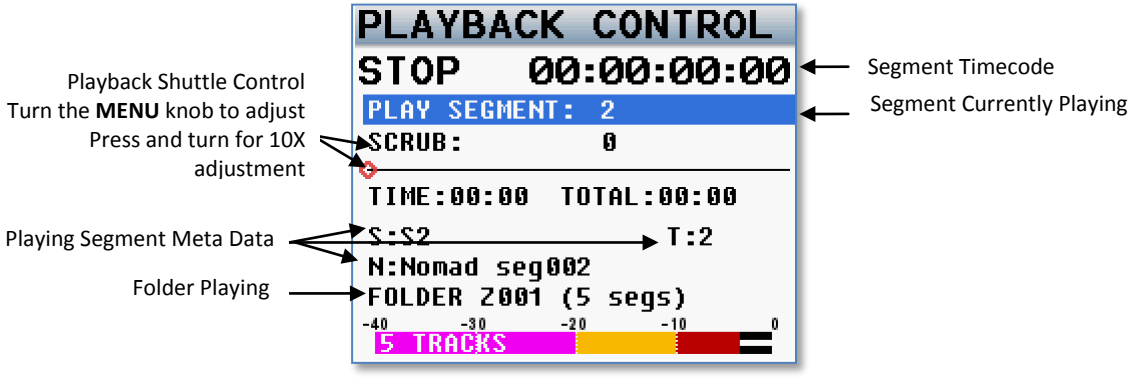
This menu displays and allows you to adjust the Meta Data.




To adjust the **META DATA** select one of the data fields and press the **MENU** knob see ***Enter Text page***

# Playback Control

This menu controls playback of recorded files.



## Record Card / Mirror Menu

This menu controls your primary recording and mirroring functions.

## Mirror Mode

- **OFF:** Maxx will not mirror any files.
- **ON:** Maxx will only start to mirror once the unit stop recording.
- **CONTINUOUS:** When Maxx is recording, the audio is copied to the mirror folder as is written to the primary folder. Depending on the track count, the mirror card may lag behind a bit. Not to worry, after you go into Stop mode, the mirror card will catch up.

**NOTE:** If you are finding that mirroring is lagging you may be using too much of Maxx's processing power elsewhere. Many times there are items that are on that are on are not needed. These items can often be shut off to conserve processing power and speed up the mirroring process. You can check to see that some of these items are not unnecessarily on:
Bus Assignments Cross Points, Compressor Enables (input, output and card), High Pass Filters and Notch Filters.

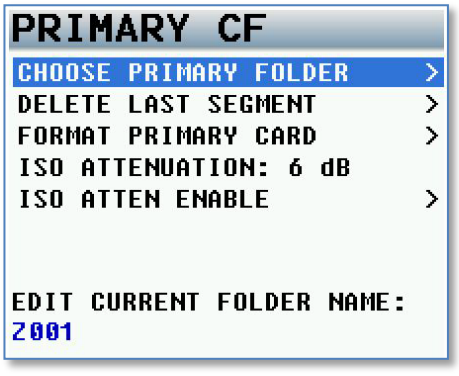
## Write Sound Report

When you select this, Maxx will create a Sound Report and write it on the Mirror CF card file. The sound report contains the Meta Data information for what was recorded.

**IMPORTANT:** Mirror mode must be turned off to write a sound report.

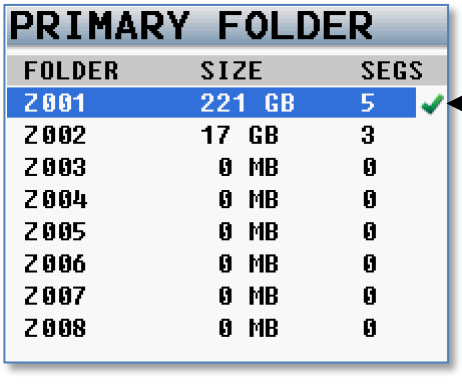
# Primary Compact Flash Folder Menu

This menu manages the primary recording Compact Flash card.




## Choose Primary Folder

Chooses which folder is used for recording audio.




Green checkmark indicates which folder the audio will be recorded to.

All recorded files are directed to individual folders. Folders can be created to help separate and organize files - for example a folder can be created for a specific date.

This menu allows you to choose which folder will be used for recording. The folder can be renamed to help identify its contents. To name your folder hit the back button and in the **PRIMRY CF** menu scroll down to the **Edit Current Folder Name** and press the **MENU** knob to change the name of the folder.

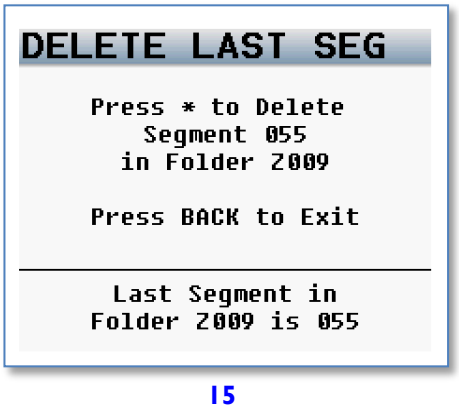
**NOTE**: Folder names need to be seven characters or less, and can contain no spaces or symbols

The primary folder is recorded as a Zaxcom MARF file. The advantage: any power loss while recording will result in no loss of any recorded audio.

In the event of a power loss Maxx automatically closes any open files to the point the audio recording was interrupted with no loss of audio up to that point. Even though Maxx uses a proprietary file system, it is 100% compatible with Mac or PC by using the free file conversion utility ZaxConvert. The latest version can be downloaded from ***www.zaxcom.com***

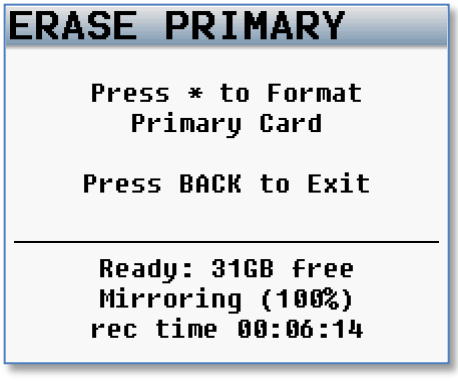
## Delete Last Primary Segment

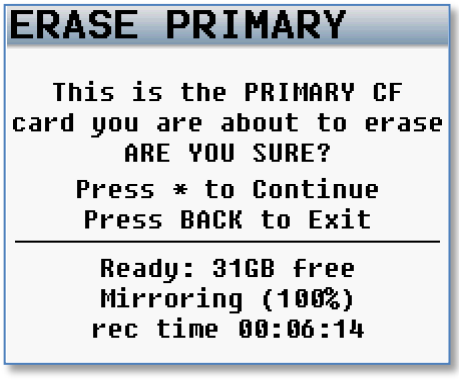
This menu allows you to delete the last recorded segment



### Format Card

This menu allows you to format the CF card. This process will take about 2 minutes to complete.

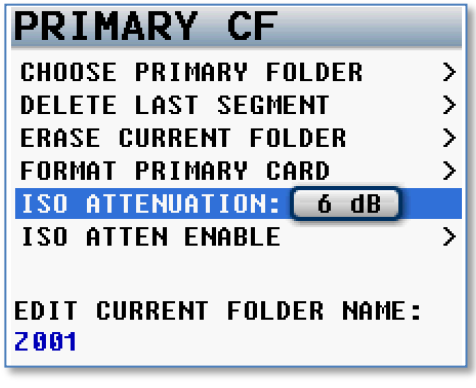



### ISO Attenuation

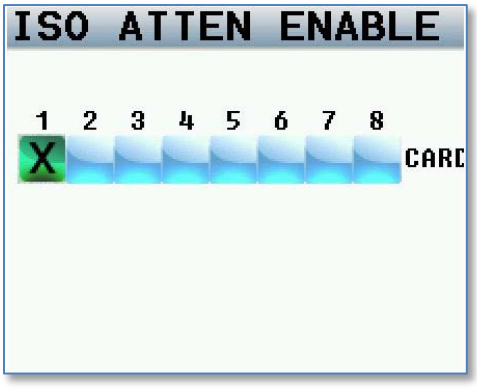
NeverClip™ inputs allow large signals to travel through the digital mixing engine using 32 bit floating point numbers. Once these large signals are recorded into a 24-bit WAV (or MARF) file, the advantage of floating point math is lost and these signals can clip if you don't use a card limiter.

**ISO Attenuation** allows ISO record tracks to be attenuated by a user selectable fixed amount of **6**, **12**, **18** or **24 dB**. This allows audio to be recorded, even if its dynamic range would normally be too large. This gain reduction is stored in the metadata of the WAV file so post can restore the amplitude of the ISO tracks, when needed.



### ISO Attenuation Enable

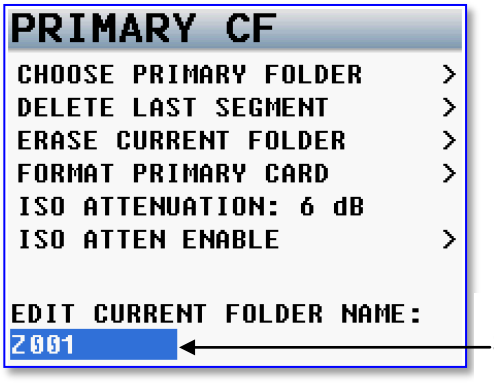
This menu allows you to choose which record tracks you choose to attenuate.




### Edit Current Folder

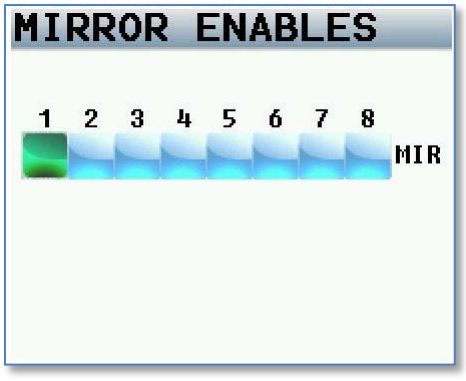
To edit the folder name

1. Scroll down to the **Edit Current Folder Name**.
2. Press the **MENU** knob to highlight the folder name and to access the ***Enter Text*** menu.



## Mirror Enables

This menu controls which of the tracks are copied on to Maxx's Mirror file.



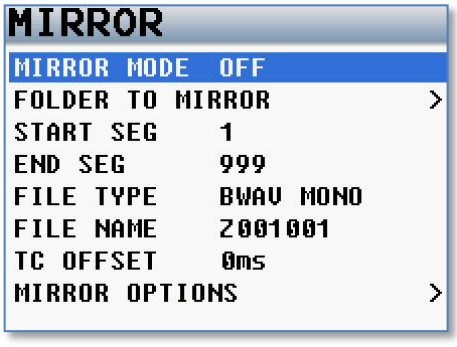

*Maxx without the ISO record option will only display two mirror tracks.*

**SHORTCUT:** It is not necessary to remove record enable cross points from the Mirror Matrix. If a Primary card track is not assigned, it will NOT be recorded and not written to the Mirror file. This allows you to leave all of the Mirror tracks enabled. This makes it unnecessary to change the tracks being mirrored every time you change a primary track.

## Mirror Settings Menu

This menu controls the copying of the Primary (MARF) audio to the Mirror CF folder.

The mirror audio is recorded as FAT32 files and is fully compatible with all Mac and PC platforms and is generally used as a deliverable format to Post.



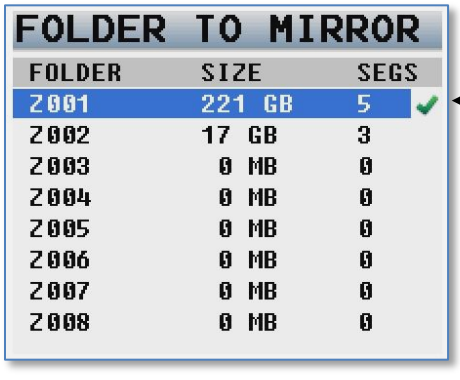

### Mirror Mode

- **OFF:** Maxx will not mirror any files.
- **ON:** Maxx will only start to mirror once the unit stop recording.
- **CONTINUOUS:** When Maxx is recording, the audio is copied to the mirror folder as is written to the primary folder. Depending on the track count, the mirror card may lag behind a bit. Not to worry, after you go into Stop mode, the mirror card will catch up.

> **NOTE:** If you are finding that mirroring is lagging you may be using too much of Maxx's processing power elsewhere. Many times there are items that are on that are on are not needed. These items can often be shut off to conserve processing power and speed up the mirroring process. You can check to see that some of these items are not unnecessarily on:
> Bus Assignments Cross Points, Compressor Enables (input, output and card), High Pass Filters and Notch Filters.

### Folder to Mirror

This menu specifies which folder on the primary media is to be mirrored.




Green checkmark indicates which folder will be mirrored to.

- If you want to **CONTINIOUS MIRROR** this folder needs to match the primary folder.
- If you want to re-mirror a folder, this folder needs to match the primary folder you want to copy.

### Start Segment

This will set the first segment that Maxx will mirror or re-mirror. When you are recording the start segment will automatically increment with each file on the primary card.

### End Segment

This will set the last segment that Maxx will Mirror or Re-mirror.

### File Type

This menu sets the type of file Maxx will mirror.

- **BWAV MONO**
- **BWAV POLY**

A **BWAV MONO** file is 1 file per track. So if you record 1 track only, 1 file will represent that "take" from the time you press record to the time you press stop. If you were to record 2 tracks for that same take, the Maxx will produce 2 files, one representing track 1 and the other representing track 2.
A **BWAV POLY** file creates one file for that take, even if the take was recorded on multiple tracks. With POLY files if a take is only 1 track the file would be 1 track. If the take was 2 tracks, it would still be one file with both tracks. This is often referred to as being "2 tracks wide". Similarly, if 8 tracks were recorded it would still be only one file, 8 tracks wide.

### File Resolution

This menu sets the bit depth that Maxx will mirror the files as.

### File Name

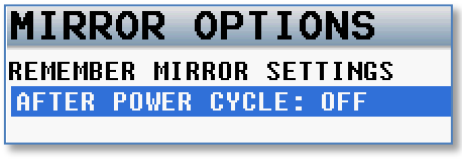
This menu sets the way individual files are named.

- **Z001001** – is the default way where the file name consists of the Folder Name (Z001 or whatever name you create) followed by the Segment Number (001).
- **1 T2 Z001** – creates a file name in the format of "**Scene Take Folder Name SegmentNumber**".
  For example if you record Scene is "1", Take "2" in folder "Z001" and the segment number is "2", the file name is "1_T2_Z0012.WAV".

If you change the Folder Name, "Z001" will be replaced with whatever you have named that folder.

**IMPORTANT:** Be careful not to create any Scene and Take text with characters other than letters or numbers with the second file naming option

### Mirror Options

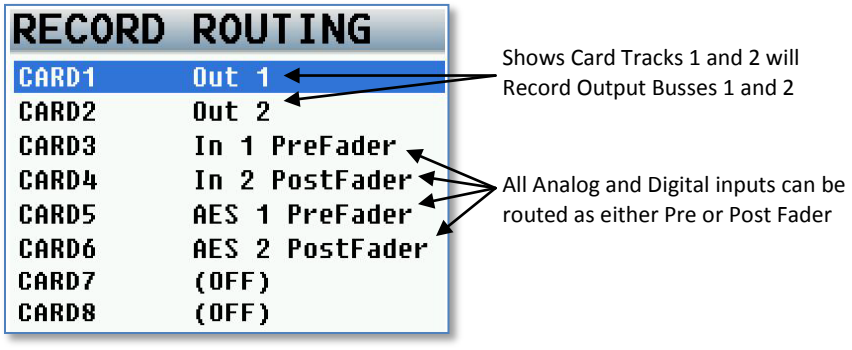



This setting allows Maxx to stay in mirror mode after it has been powered off.

- **OFF** – Any time Maxx is powered up **Mirror Mode** will default to **OFF**.
- **ON** – Maxx will remember the **Mirror Mode** after it is powered up. So if you had Maxx set to Continuous Mirror it will go to that setting after it powers up.

## Record Routing

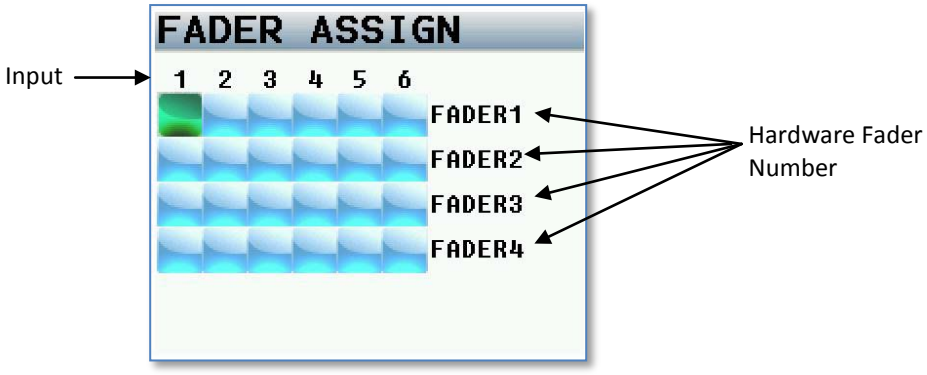
This menu controls what is routed to each record track.




In the record routing page you select and highlight which card track you want to record on then you can choose what source you what to assign and record on that channel. You can choose between all 6 analog inputs, or the 2 output busses. If Maxx is equipped with the AES option you can also assign the digital inputs as well.
All inputs can be assigned as either pre or post fade.

## Fader Assign Matrix

This matrix controls which inputs are assigned to the four hardware faders.




Maxx is a digital mixer, so no actual audio is going through the fader controls allowing for complete flexibility for the hardware faders. Any one of the analog inputs 1-5, digital inputs 1-4 (available on Maxx with AES option), or analog trim can be assigned to any of the 4 hardware faders.

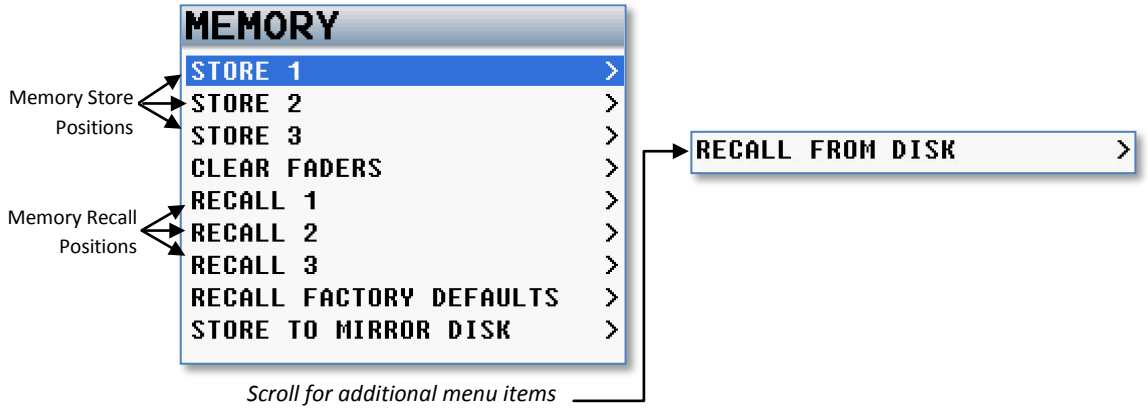
### Setting a Cross point

Rotate the **MENU** knob to scroll through the matrix. Stop in the matrix, at the intersection of the input channel and output channel, where you want to send that specific input. Press the **MENU** knob to cycle through the available cross points, which are:

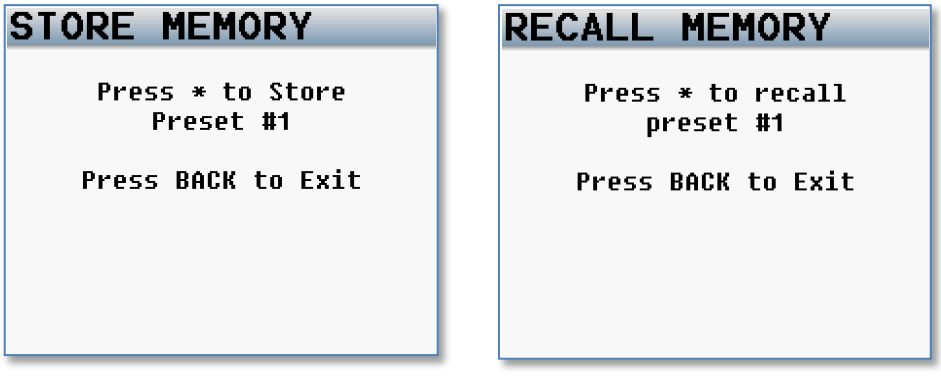
- Blank – No Assignment
- **A** – Assign an analog input to a fader
- **D** – Assign a digital input to a fader
- **T** – Trim where the fader knob will work as a hardware trim knob
  *To turn on the Trim option you need to press the STAR key while in this menu. After the STAR key is pressed you will be able to cycle through the Trim option.*

**NOTE:** If you are using a multiple-element mic (i.e., stereo, surround, etc.) and you assign all of the channels to one master fader you need to disable the AutoTrim™ function.

# Memory Menu




## Store / Recall

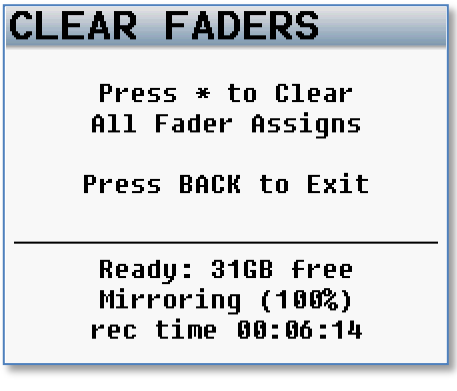



From this page, you can save and recall three full setups for different scenarios. All user set parameters are saved and can be recalled as needed.

**NOTE:** If you do a factory restore, all of the saved memories will be erased.

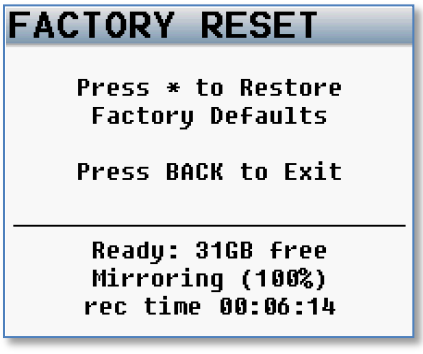
## Clear Fader Assigns

This menu clears all of the current fader assign settings.



### Factory Reset

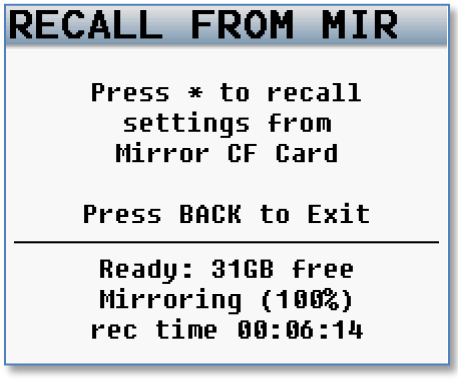
This menu resets all the parameters back to factory default.




**WARNING**: If a factory reset is run, all of your user setting will be lost and have to be re-input. Though a factory restore will not erase Note and Track presets. To do a full restore - including Note and Track names hold the stop key on boot up.

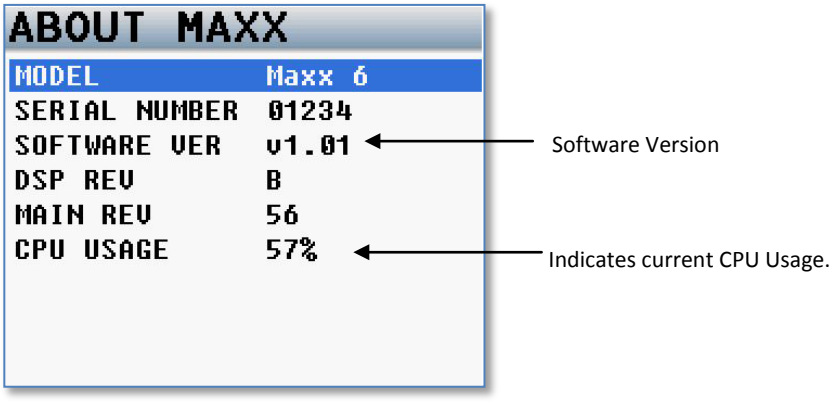
### Store / Recall using the Compact Flash Card

Maxx also has the option to save settings to (and restore settings from) the mirror Compact Flash card. This allows settings to be exchanged between multiple machines.



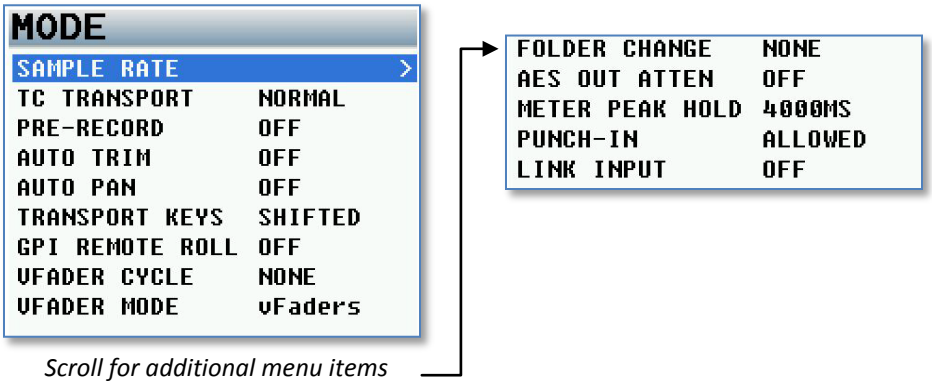
## About Maxx Menu

This menu gives you information about your Maxx



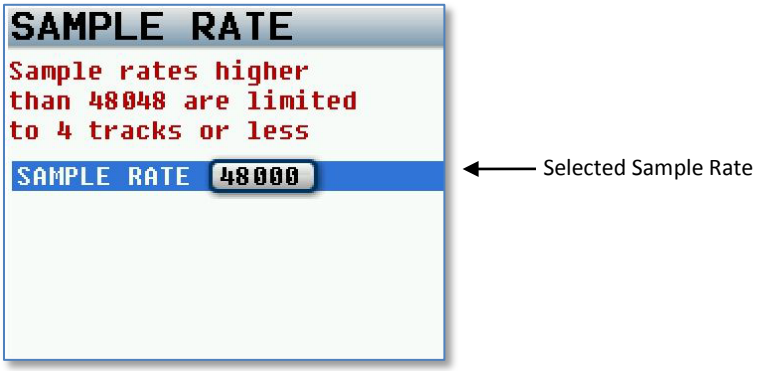
# Mode Menu

This menu sets up Maxx's engineering parameters.




### Sample Rate

This is where the sample rate that Maxx will record file at is selected. Maxx can record with sample-rates of: **44100**, **47952**, **48000**, **48048**, **88200**, **96000, 192000**




When recording files at a high sample rate of **88200**, **96000** or **192000** there are some limitations to Maxx's recording parameters.

- Maxx will record up to 4 analog iso inputs pre-fader only.
- Fader assign will be disabled - since all inputs will be routed pre-fader
- Record track assignments will be Input 1 to track 1, input 2 to track 2, input 3 to track 3 and input 4 to track 4.
- Input and card compressors will be disabled.
- NeverClip will be disabled.
- While Maxx will record time coded files the BNC time code connector is disabled - meaning Maxx's time code generator will function but you will not be able to receive external time code or send time code via the BNC connector.
- Prerecord is limited to 2 seconds for all sample rates with the exception of recording more than two tracks at 192K prerecord will be limited to 1 second.

### TC Transport

This will adjusts the way Maxx will go into record mode

- **Normal** – Maxx will go into record when you push the record button
- **Auto Load** – Maxx will go into to record with it senses record run timecode coming from an external source.

### Prerecord

This allows you to have Maxx buffer the audio in a prerecord buffer. You can choose to buffer up to 5 seconds of audio. From the point the Maxx is powered up, it is always processing data, and any sound coming in from any input is always being processed. When pre-record time is enabled, the signal is held in a buffer until you press the **REC** key.
At that time, all stored audio in the buffer is included the current take with the correct time code.

The pre-record buffer is dumped after any of the following settings are changed:

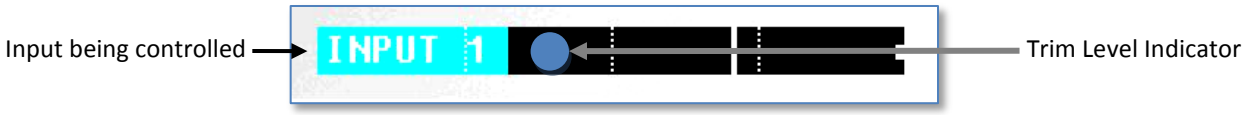
- Sample-rate, Time code, User-bits, Frame- Rate, Track count

> **NOTE:** Prerecord is limited on sample rates of 88200, 96000 or 192000. The prerecord is limited to 2 seconds with the exception of recording more than two tracks at 192K - then prerecord will be limited to 1 second.

> **NOTE:** Running prerecord doesn't use any additional battery power.

### AutoTrim™

AutoTrim™ is a feature that makes the **MENU** knob act an individual trim knob for all you inputs. When AutoTrim™ is turned on and you adjust a fader the blue LED next to that fader will illuminate indicating the input associated with that channel will be trimmed when you rotate the **MENU** knob. When you adjust another fader, the trim function will move to that input.




**Trim Meter**

### AutoPan

AutoPan is a feature that causes the **Power Key** act an individual pan knob. When AutoPan is turned on in the mode menu and you adjust a fader the blue LED next to that fader will illuminate indicating the input associated with that channel will be panned when you the **Power Key** is pressed. AutoPan is active from any meter screen.
When pressing the **Power Key** the panning for the illuminated channel will cycle from Left to Center to Right to Blank - unless "Prevent Empty Pan" is turned ON then the blank option will not be cycled through.
As you AutoPan the headphone display will temporally show which input is panned to which position.
To AutoPan inputs 5 and 6 you need to be in the ENG meter screen and have VFade mode set to ON. Then when the input trim meter is visable for that input then the Power Key will pan that input.

When AutoPan is activated the headphone display will temporally show which input is panned to which position.

**Analog input 1 panned Left, Center, Right**

### Transport Keys

#### SHIFTED

If the **TC**, **BUS** or **SETUP** key is pressed, the items associated with those keys will open. To go into Record, Playback or Stop, it is necessary to SHIFT those keys. You will need to press the **MENU** knob to "**SHIFT**" while simultaneously pressing the **REC**, **PLAY** or **STOP** key to go into that mode.

> **NOTE:** It is still possible to directly access the **REC**, **PLAY** and **STOP** functions by pressing the appropriate key for 1 second. This is the most popular choice for most users.

#### UNSHIFTED

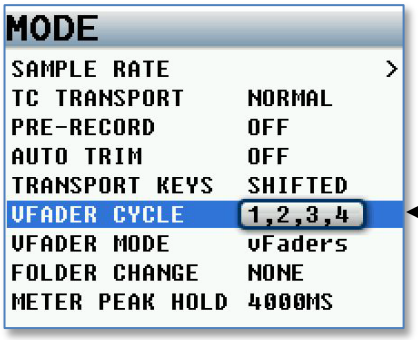
Pressing the **REC**, **PLAY** or **STOP** key immediately puts Nomad into Record, Playback or Stop. To display the pages associated with the **TC**, **BUS** or **SETUP** key, it is necessary to press the **MENU** knob while pressing the **TC**, **BUS** or **SETUP** key.

## VFader Cycle

Virtual fader will allow you to mix Analog inputs 5, 6 and the AES inputs right from the **ENG Home screen**.
If you activate "**VFADER CYCLE**", you can adjust the mix for the AES inputs right from the **ENG Home screen**.
The **MENU** knob will become the hardware fader for those inputs.

**VFADER CYCLE** lets you choose which inputs (if any) you want to be able to mix in the **ENG Home screen**:
Inputs 5 and 6 are the analog return inputs.

- **NONE**
- **1 ONLY**
- **1, 2**
- **1, 2, 3**
- **1, 2, 3, 4**
- **1, 2, 3, 4, 5**
- **1, 2, 3, 4, 5, 6**




Shows which inputs will be available when the Virtual Fader is activated

> **NOTE**: If you need to access the **Main Menu** from the ENG meter screen while the VFader mode is active, you will need to press and hold the **MENU** knob for approximately 1.5 seconds.

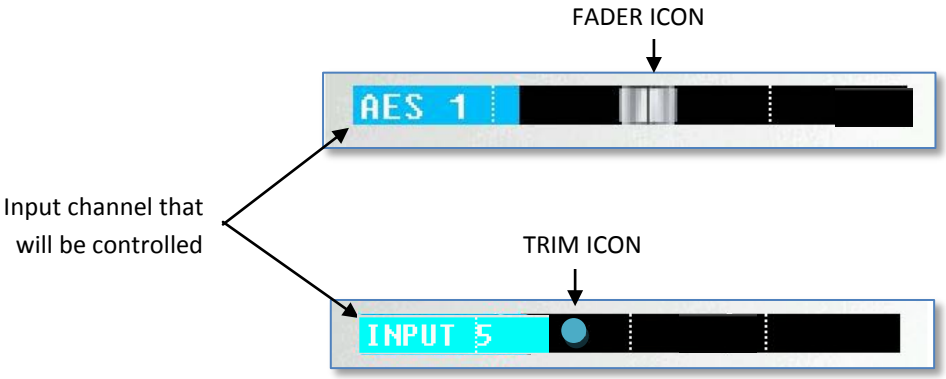
## VFader Mode

This lets you choose to control the fader only or alternate between fader and trim for the inputs that you chose to be active in the **VFADER CYCLE.**

When the virtual fader is active the bottom meter on the **ENG screen** will display what you will be controlling – either fader only or fader and trim for an input channel.

Only the Faders will be controlled

Both the Faders and Trim will be controlled
Pressing the MENU knob will alternate between Fader and Trim control




This mode is only active while in the **ENG Meter Screen**.
When in this mode to control the faders for digital inputs 1 – 4 or faders and trim for analog inputs 5 and 6:

- Press the **MENU** knob and the bottom meter on the ENG meter screen will display what input will be controlled with the **MENU** knob.
- If the Fader Icon is displayed the **MENU** knob will adjust the mix.
- If the Blue Trim Icon is displayed the **MENU** knob will control the input Trim of that input.
- Pressing the **MENU** knob will advance to the next item.

## Folder Change

If set this to **AutoChange**, when the Primary Folder is changed, the Mirror Folder automatically changes to the newly selected folder.

- **None** - Mirror folder will have to manually be changed to match the selected primary folder.
- **AutoChange** - When the primary folder is changed - the mirror folder will automatically change to the same folder.

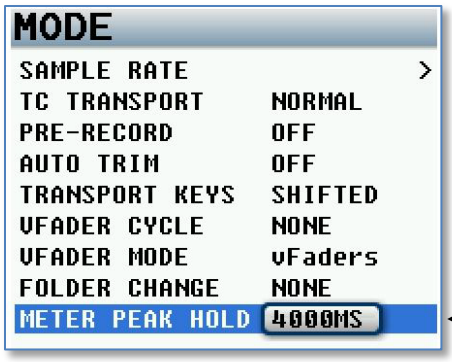
> **NOTE:** The **Mirror Mode** stills needs to be turned OFF before changing the Primary Folder.

## AES Output Attenuation

This will attenuate the AES output level by the amount selected in the menu. The AES attenuation will allow you to take full advantage of the dynamic range of the Never Clip inputs. The output attenuation works the same way as the ISO attenuation on Maxx's record tracks works.
The adjustable range is from **1dB** to **20dB** in **1dB** increments.

### Meter Peak Hold

This sets the duration that the peak indicator is held in the meters. The range is **400MS** – **8000MS** with a step value of 200 MS.

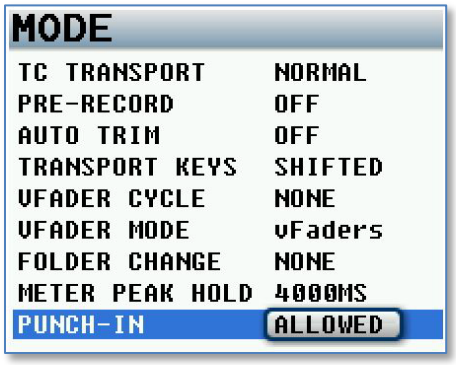



### Punch-In

Punch-In gives the user the ability to start a new segment while recording.

- **ALLOWED** - Pressing and holding the **REC** key while recording will create a new file.
- **DISABLED** - You cannot create a new file while recording.

If you turn on the Rec/Stop warning option in the **ENG Menu**, there will be an audible beep when a new file is created. The beep is heard in the headphones only.

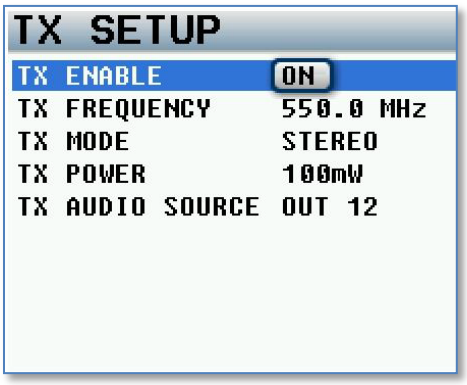



**NOTE**: Regardless of this setting Maxx will always create a new file when the current file reaches 2GB in size.

### Link Input

When set to ON the link input allows Maxx to receive the AES mix bus output from another Maxx / Nomad, or any other AES source. The received AES audio channels are mixed individually to the output bus of Maxx. This links the two recorders together allows more inputs to be mixed to the output busses.

## Transmitter Setup - *only available with the Camera Link transmitter option*




### Transmitter Enable

This turns ON / OFF the UHF camera link transmitter.

### Transmitter Frequency

This sets the transmit frequency of the UHF camera link transmitter.

### Transmitter Mode

This sets the transmit mode of the UHF camera link transmitter.

- **MONO** - Maxx will transmit one output bus.
- **STEREO** -Maxx will transmit both output busses.

### Transmitter Power

This sets the transmitter power level. You can select **25, 50 or 100mW**

### Transmitter Source

This sets the source of audio that will feed the UHF camera link transmitter.

- **OUT 12** - Maxx will transmit what is being sent to the output buses 1 and 2.
- **TAPE / MONO**-Maxx will transmit what is being sent to tape and mono output buses.

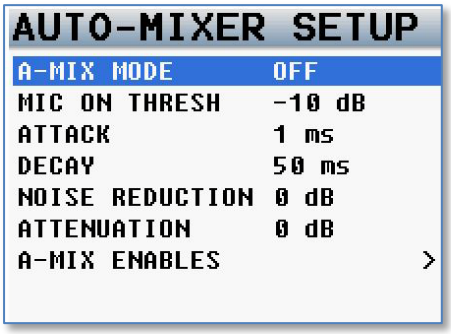
# Auto-Mixer

When Auto-Mixer is on, and a speaker starts to talk, Maxx will automatically open that microphone and add that microphone to the mix. Then when a speaker stops talking that microphone will be attenuated "closed" and essentially be removed from the mix.

Removing unused microphones will result in a lower noise floor giving you a cleaner, better sounding mix without having to manually ride the faders. Manually riding faders in unscripted dialog often results in missing the start of when a person begins to speak.

Maxx's Auto-Mixer has no limit on the number of microphones that can be active at one time. The Auto-Mixer also has a last microphone on feature; this means that even if no one is speaking there will always be one microphone included in the mix, which will be the last active microphone. The last mic on feature allows the mix to never go to absolute silence.

**NOTE:** Auto-Mix will be routed to the output bus selected in the A-Mix Enables menu. When using Auto-Mix make sure you remove all cross points in the Bus Assign Matrix for the chosen bus or busses. If any cross points are active they will be mixed into the Auto-Mixer audio.




## A-Mix Mode

Enables Maxx's Auto-Mixer and sets if the Auto-Mixer will act pre-fade or post-fade.

- **Pre-Fade** - The Auto-Mixer is inserted before the faders in the audio chain so only the trim control will affect the microphone levels. Since the Auto-Mixer is before the faders the faders have no affect on the levels.
- **Post-Fade** - The Auto-Mixer is inserted after the faders in the audio chain and both the trim and the faders will control the levels of the microphones.

## Mic On Threshold

Sets the level that a microphone needs to be reached before that microphone opens.

When a speaker's microphone reaches the **Mic On Threshold** level, as indicated on the input meter, that microphone will open and become part of the mix.

- **Mic On Threshold** can be set anywhere between **-60dB** and **-10dB**

## Attack

Sets how fast the microphone is added to the mix when a speaker starts to talk.

- **Attack** can be set anywhere between **1** and **150 ms**

## Decay

Sets how long a microphone will stay active after the signal has fallen 10dB below the Mic On Threshold.

- **Decay** can be set anywhere between **1** and **150 ms**

## Noise Reduction

Sets how much the output noise floor is attenuated when no one is talking.

- **Noise Reduction** can be set anywhere between **0dB** and **-10dB**

### Attenuation

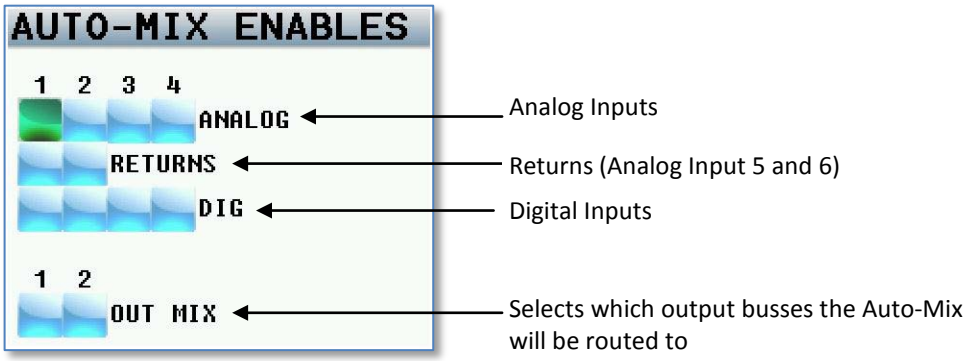
Sets how much each microphone is attenuated when it is closed.

- **Attenuation** can be set between **-10dB** and **-80dB**

**NOTE:** When a microphone is closed the level of that input is actually attenuated rather than muted. The level of attenuation is adjustable by the Attenuation setting. In some noisy environments it may be more palatable to hear some / most of the ambient mic noise all the time rather than hear the noise mute and then re-appear when someone talks.

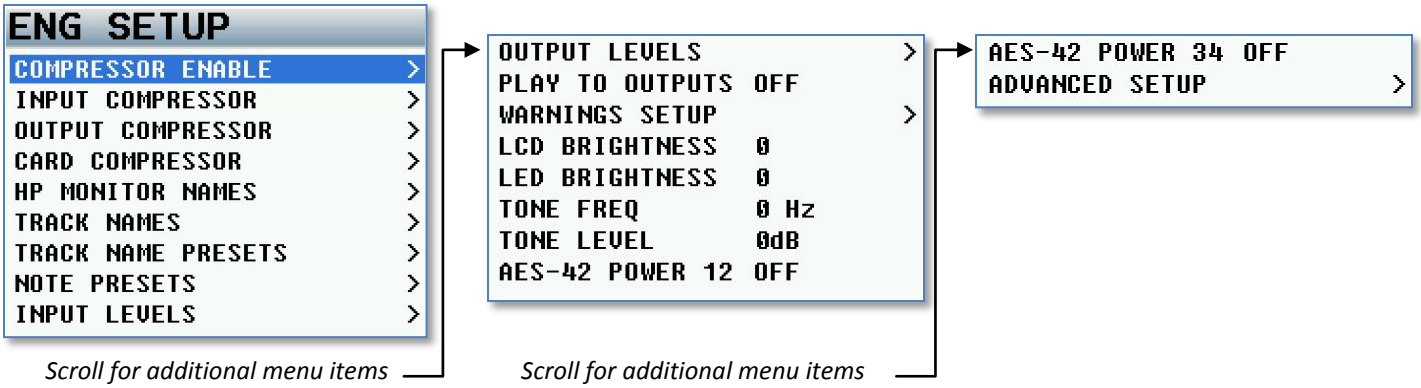
### Auto-Mix Enables

The Auto-Mix enables matrix sets which inputs are included in the Auto-Mix. When an input is selected to be included in the Auto-Mix an "A" will be displayed to the right of the input meter.
This matrix also sets which output buses the Auto-Mix will be outputted to.



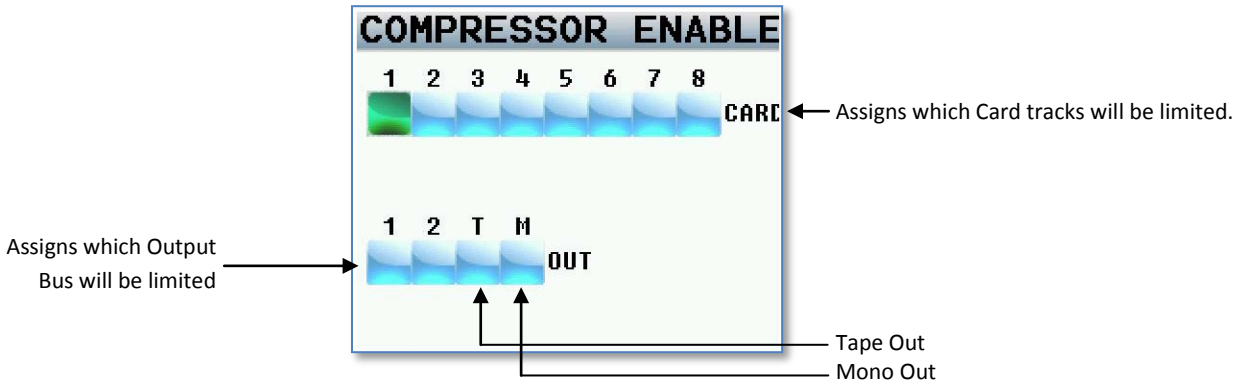
# ENG Setup

This menu sets up Maxx's engineering parameters.



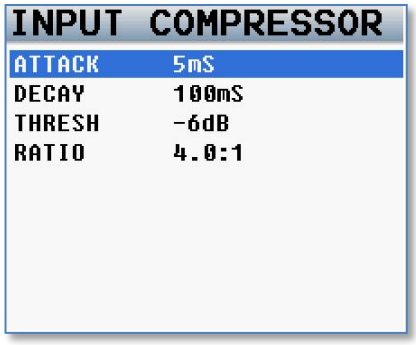

## Compressor Enable

This matrix lets you set which card tracks, output busses, and if the tape out or mono out will have their compressor / limiters enabled.



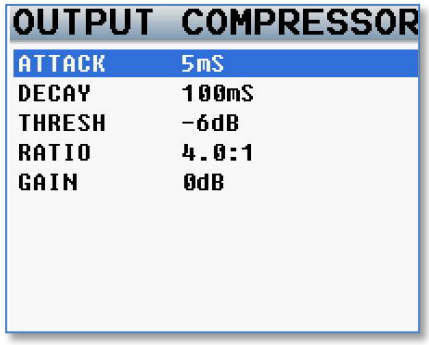
### Input Compressor Parameters

This menu lets you set the parameters for the Input Compressors. The Input Compressor settings are global, meaning that the settings adjusted here will the same for all Input Channels.



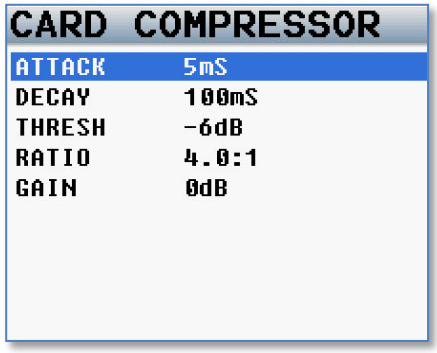

### Output Compressor Parameters

This menu lets you set parameters for the Output Compressors. The Output Compressor settings are global, meaning that the settings adjusted here will the same for all Output Busses.



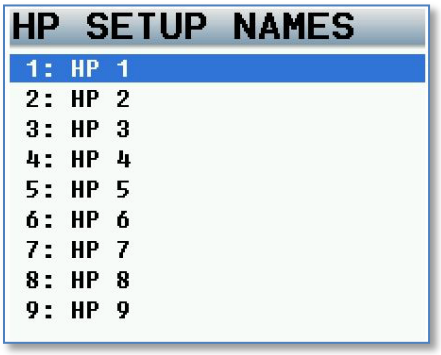

### Card Compressor Parameters

This menu lets you set parameters for the Card Compressors. The Card Compressor settings are global, meaning that the settings adjusted here will the same for all Card Tracks.



### Headphone Names

This menu allows you to customize the headphone monitor names that appear in the home screens. Once you click on a **HP** number, you will be taken to the ***Enter Text page*** (**p.44**)




### Track Names

This menu allows for the naming of record tracks. The track names are displayed within the card meters and are contained in the files metadata so post can easily identify the source of a recorded track.
After selecting a track to name pressing the menu knob will open the ***Enter Text*** menu which allows you to manually name the track. Or by pressing the PFL key allows you to choose from the list of preset names.

**To select from the list of Track Preset Names**:

1. Highlight the track you want to name
2. Press the PFL key
3. Select the preset you want enter
4. Press the Menu knob

### Track Name Preset

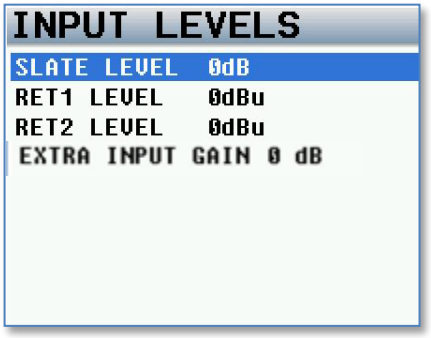
This menu allows for the creating a preset list of track names. There are 20 track name presets available. Existing names can be edited and new track names can be created. The track names can be up to 22 characters long.

## Note Presets

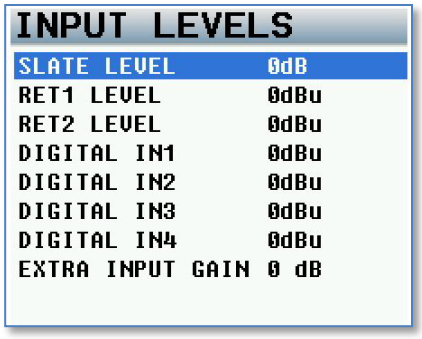
This menu allows for the creating a preset list of notes. There are 20 note presets available. The existing notes can edited and new notes names can be created. The notes can be up to 22 characters long.

## Input Levels

This menu allows you to adjust the audio input levels for the slate, camera returns and on Maxx with the AES option the digital inputs.




Maxx without AES option




Maxx with AES option

**Slate Level**

This adjusts the internal slate microphone level. The level is independently adjustable in 1 dB steps from **–12dBu** to **21dBu**.

**Return / Analog Input 5 and 6 Levels**

This adjusts the levels of the return / analog 5 and 6 inputs. The level is continuously adjustable in 1 dB steps from **-20dBu** to **30dBu**.

**Digital Inputs 1-4 Levels**

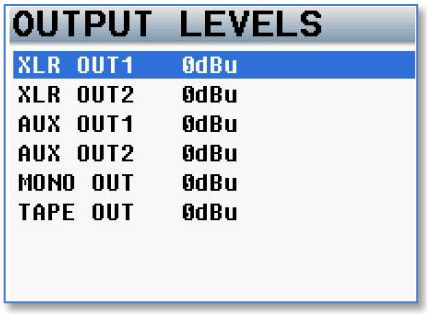
This adjusts the levels of the digital inputs. The levels are continuously adjustable in 1 dB steps from **-20dBu** to **30dBu**.

**Extra Input Gain**

This allows you to add 10dB of digital gain to your inputs. This is a global setting for your XLR inputs. This will also increase your noise floor.

## Output Levels

This menu allows you to adjust the output audio levels.




**XLR & AUX (TA5) Output Bus Levels**

Each of the XLR and Aux Outs can be independently adjusted to one of the following output levels:

- **0dBu** – line level
- **-10dBu** – tape / consumer level
- **-35dBu** – mic level

**Mono & Tape Output Bus Levels**

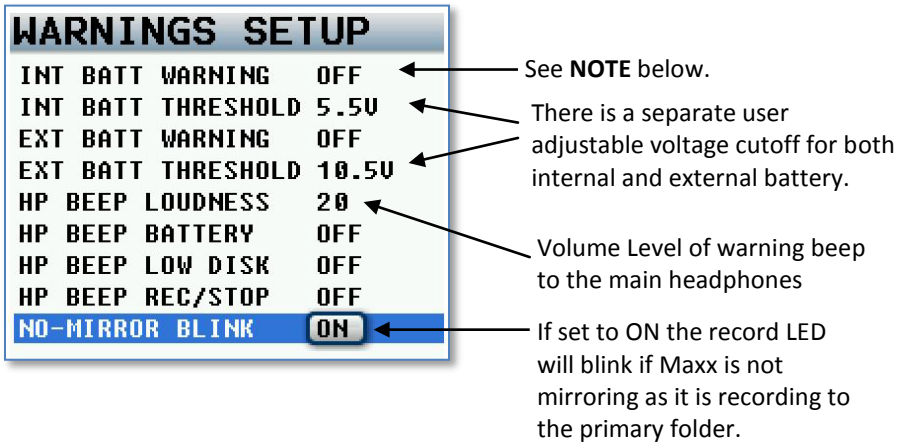
Independently adjusts the output level for Mono and Tape Outs, and each are continuously adjustable in 1 dB steps from **–12dBu** to **21dBu**.

## Play to Outputs

This sets if the playback audio will be sent to the output busses when playing back recorded audio.

- **OFF -** Playback audio will not be outputted to the output buses when playing back. Live audio will continue to be sent to the outputs.
- **ON -** Playback audio will be outputted from the output busses when playing back. Live audio will be muted and the playback audio only will be sent to the outputs.

## Warnings Setup




This menu manages the audible alerts sent to the headphones. These warnings will also be displayed on the LCD screen. Once one of the warning pages is being displayed on the LCD screen, pressing the **Headphone** knob will clear the warning from the screen.

**NOTE**: If no internal batteries are being used, it is recommended to turn off the internal battery warning option.

### LCD Screen Brightness

Adjusts the brightness of Maxx's LCD Screen. The LCD screen brightness adjusts from **0** to **11**.

### LED Brightness

Adjusts the brightness of Maxx's LEDs. This is a global setting meaning that all LED lights will be set to the same brightness. The LED brightness adjusts from **0** to **30**.

### Tone Frequency

Adjusts the frequency of the Tone. The range is **20** to **20,000 Hz**.

### Tone Level

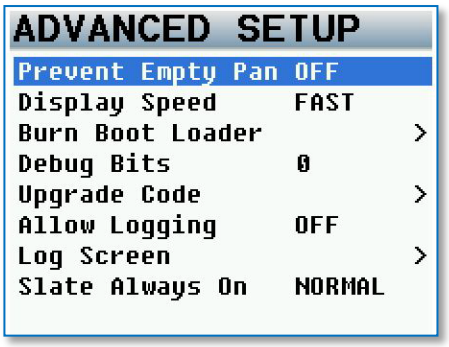
Adjusts the output level of tone. The range is **-90** to **0dB.**

> **NOTE:** It is recommended to keep the tone level set at the industry standard of -20dB.

### AES-42 Power - *only available with the AES option*

This menu enables AES-42 power for each AES pair.

## Advanced Setup Menu




### Prevent Empty Pan

When set to **ON**, you remove the blank option while in ENG or AutoPan pan mode, leaving only the **L, C, R** option.

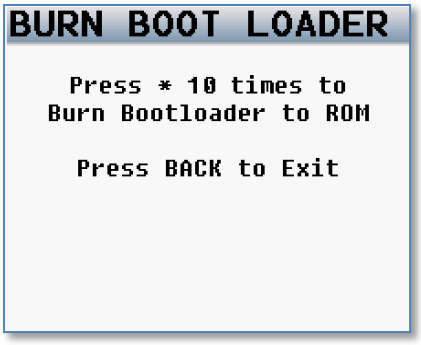
### Display Speed button

This should be set to **FAST.**

Currently the display is updated every frame. If you are using a lot of effects and cross points and/or are running at 192 kHz and find that the user interface is getting hard to use. The **SLOW** setting will slow down the refresh rate. The display will automatically go into **SLOW** when mirroring or when the unit needs more horsepower for recording.

### Burn Boot loader

The boot loader is part of the software that helps boot up Maxx. Generally, you wouldn't need to update this. If the boot loader needs to be updated there will be a note released with the software to do so. The boot loader software is already contained within Maxx's software.'




### Debug Bits

This is a factory diagnostic tool and the setting and should stay set to **0**.

### Upgrade Code

This page is used to enter in a factory code to upgrade Maxx.

**WARNING:** Randomly entering in code numbers can cause your Maxx to lock up, permanently. It will need to be sent in for service.

### Allow Logging

If this is set to **ON** it allows Maxx to log warning and error messages as well as status. The logged messages are displayed on the log screen.

### Log Screen

This is where Maxx displays the logged errors and warnings. This is used to diagnose your Maxx.

### Slate Always On

- **Normal** - This is the typical setting that would be used. With this setting pressing and holding the slate key will activate the slate mic.
- **Forced** - When you activate the slate mic this setting locks the slate mic in the on position. Note a power cycle will deactivate the slate mic and the default this mode back to normal.

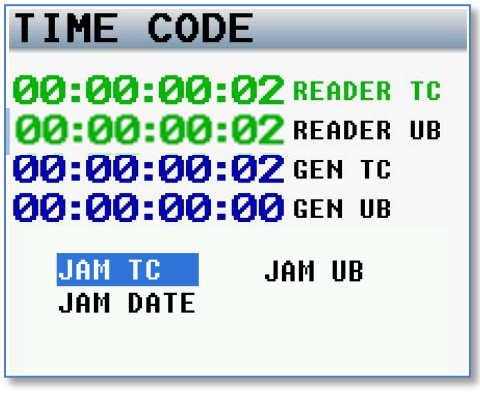
# Pressing the Timecode Key

## Timecode Slate

Pressing the **TC** key once brings you to, an inverted visual timecode slate. Pressing the **MENU** knob will freeze the display and cause a 1-frame long beep tone in the audio on any bus that is selected for tone output.

This is used to provide sync for the camera to match picture and sound.

## Timecode Jam



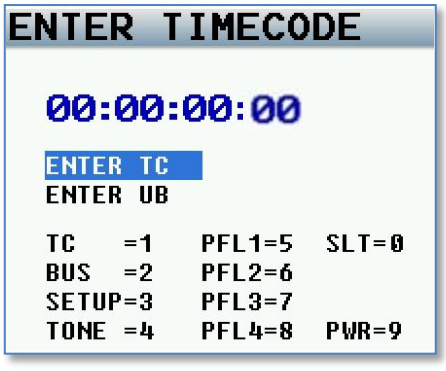

Pressing **TC** a second time brings you here.

This menu displays Maxx's TC reader. The reader is displaying timecode and User-Bits from a source that is connected to the timecode in.
Also displayed are the current running timecode of its internal timecode generator, as well as the local user-bits.

**NOTE:** Maxx contains a battery backed real-time clock. This clock is used to maintain running timecode.
It is advised to change the battery every 2 to 3 years. The battery that maintains the timecode and clock is a CR2320 3V coin cell battery.

- **JAM TC** - Jams Maxx's TC from an external source, such as a camera or a master TC unit.
- **JAM UB** - Jams Maxx's User-Bits from another source, such as a camera or a master TC unit.
- **JAM DATE** - Jams the date from Maxx's internal calendar to the User-Bits.

## Enter Timecode




### Manually Entering Timecode

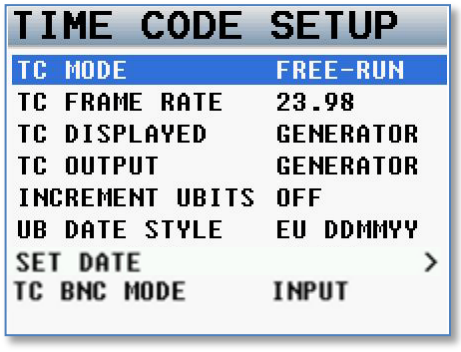
1. Press the **MENU** knob to highlight the TC.
2. Rotate the **MENU** knob to select the desired entry position.
3. Press the keys to enter a numeric value.
4. Once you enter the last digit, the TC is entered immediately and jammed

**NOTE:** If you don't enter the entire eight digits, press the **MENU** knob to force the jam.

### Manually Entering User-bit

1. Each character position can take a hex number (0 – 9, A – F).
2. To enter A – F, double click the keys.
3. Once you enter the last digit, the User-Bits are entered immediately.

## Timecode Setup




### TC Mode

- **FREE-RUN** – Time code runs continuously.
- **REC-RUN** – Time code will start to run when Maxx begin to record.
- **CJAM** – Time code and user-bits are continuously updated from a connected external source.
- **CJAM TC** – Time code only is continuously updated from a connected source.
- **CJAM UB** – User-bits only is continuously updated from a connected source.

### TC Frame Rate

This sets Maxx's time code frame-rate.
Maxx supports all standard SMPTE frame-rates:
**23.98**, **24**, **25**, **29.97**, **29.97DF**, **30**, **30DF**

### TC Displayed

This sets what time code that Maxx displays

- **GENERATOR** – The time code that is displayed is from Maxx's internal time code generator.
- **CARD** – Time code is displayed from the file being recorded or played back.
  - While in Playback – Time code displayed is the current point in the take.
  - While in Record – Time code displayed is the time code being recorded during the take, as it happens.

### TC Output

This sets what timecode is sent from the time code output connector. If you need to send running timecode to another device, set it to **Generator**. If you want to control another timecode device with an Auto-Load capability, set it to **Card**.

- **GENERATOR** – The time code that is displayed is from Maxx's internal time code generator.
- **CARD** – Time code is displayed from the file being recorded or played back.
  - While in Playback - Time code displayed is the current point in the take.
  - While in Record – Time code displayed is the time code being recorded during the take, as it happens.

### Increment UBits

If set to **ON** the user-bits will increment with each take.

### UB Date Style

This is used to set how the date is displayed within the user-bits if you chose to assign the date as the user-bits. You can choose European or US styles

### Set Date

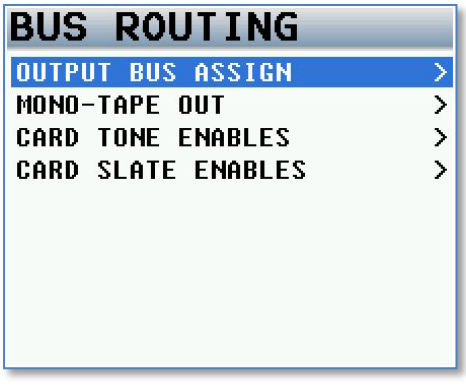
This sets Maxx's internal calendar.

### Timecode Routing

This menu sets the function of the BNC timecode connector.

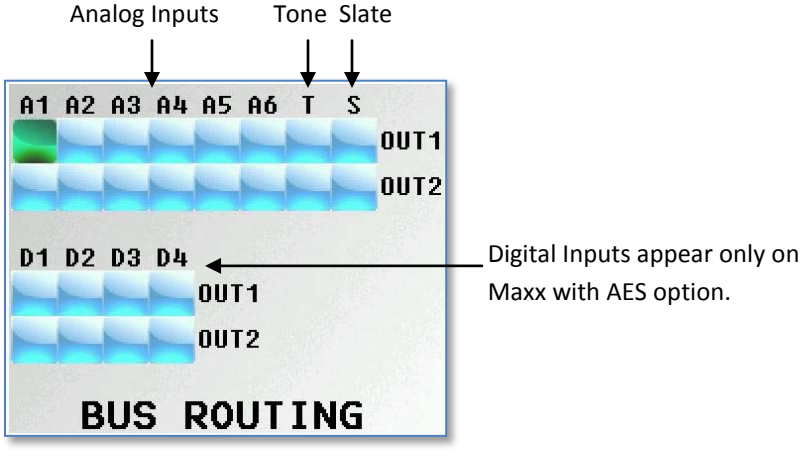
- **OUTPUT -** Maxx will output timecode on the BNC connector.
- **INPUT** - Maxx will receive timecode on the BNC connector.

# Pressing the Bus Key




## Output Bus Assign Busses

This matrix assigns your Analog and Digital inputs to your output buses. The output busses can be assigned either pre or post fade audio.




The top line of the three pages indicates the following sources:

- Analog Inputs 1-6
- **T** - Tone
- **S -** Slate
- **D -** Digital Inputs - *only available when AES option is enabled.*

### Setting a Crosspoint

Rotate the **MENU** knob to scroll through the matrix. Stop in the matrix, at the intersection of the input channel and output channel, where you want to send that specific input. Press the **MENU** knob to cycle through the available cross points, which are:

- **X** – post-fader
- **P** – pre-fader
- $\overline{\mathbf{X}}$ – post-fader, phase inverted
- $\overline{\mathbf{P}}$ – pre-fader, phase inverted

**NOTE:** To add the optional phase invert items to the list, while in this matrix press the **STAR** key. Then by pressing the **MENU** knob, you will now be able to cycle through the selections with phase invert.
Power cycling the unit will reset it to NO INVERSION mode but keep your phase invert choice.

## Tape/Mono Out Matrix

This matrix sets what audio is routed to the Tape and Mono out connector.
Any of the inputs, including digital inputs, or output busses can be routed indecently to the tape and or the mono out.

Maxx without AES option

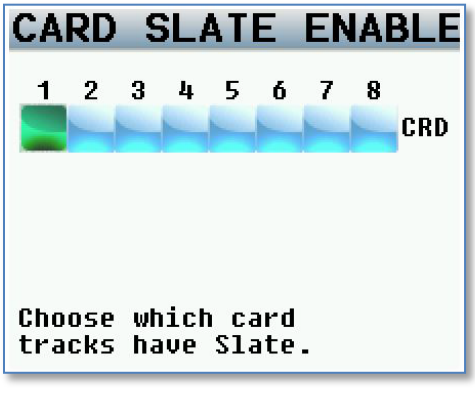
Maxx with AES option

## Card Track Tone Enable

This matrix assigns **TONE** to the record tracks.

## Card Track Slate Enables

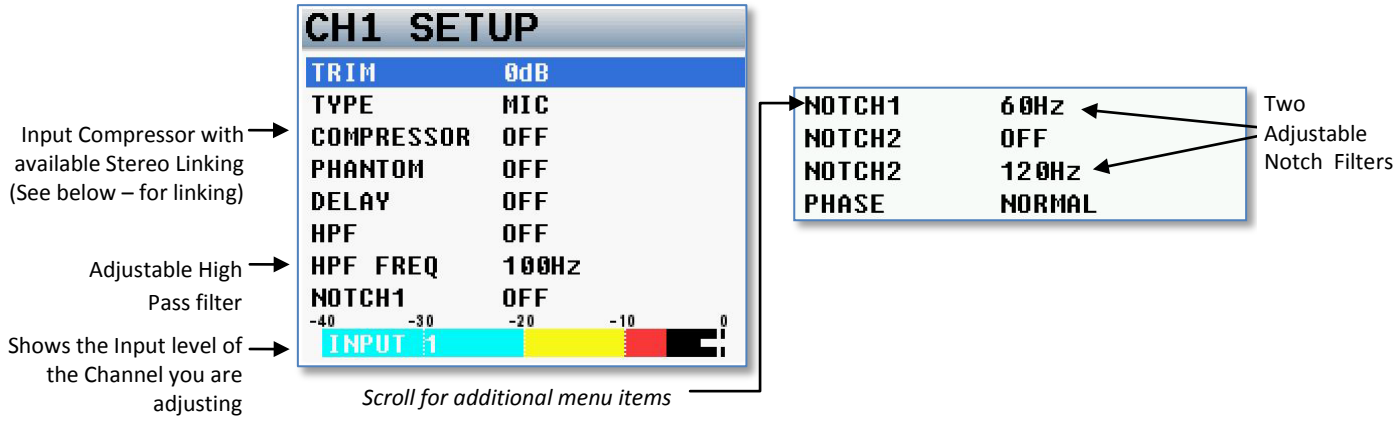
This matrix assigns the **SLATE** to the record tracks.



# Pressing the Setup key

## Analog Input Setup

Pressing the **Setup** key will take you to the analog **Setup menu** where you can adjust the parameters of the 4 analog inputs.




While in the setup menu, pressing the **TC, BUS, SETUP, TONE** keys will jump to the Setup page of the corresponding input channel.

### Adjustable Parameters

- **Input Trim**
- **Input Type –** Mic Level or Line Level
- **Input Compressor** – Turns on the input compressor and sets link group
- **48 Volt Phantom Power –** On or Off
- **Input Delay –** Variable from .0ms to 100ms in .01 ms increments
- **High Pass Filter –** Turning on the HPF turns on a fixed frequency hardware cut. Adjusting the frequency adjusts a software filter that is adjustable between 40Hz to 230Hz
- **Two Variable Notch Filters**
- **Phase Invert**

### Input Compressor Linking

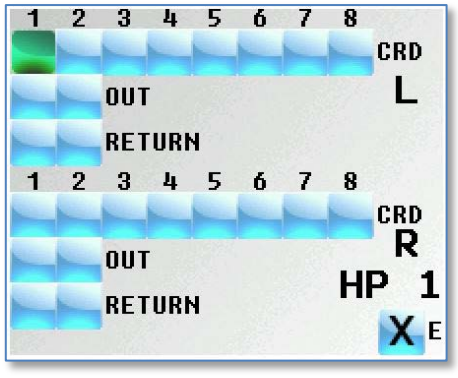
When using a stereo or surround microphone the input compressors (limiters) should be LINKED to insure that the spatial integrity of the signal is maintained.
Your choices are: **OFF**, **ON**, **GroupA**, **GroupB** and **GroupC**. This allows you to have up to three different groupings.

For example, a stereo microphone on inputs 1 and 2 would have their limiters set to Group A. If the signal on input 1 needs limiting, the limiters on both 1 and 2 will activate together rather than just the limiter on channel 1.

## Digital Input Setup

When in the Setup menu if you press the PFL key for the corresponding AES input number will take you to the digital setup menu for each of the digital inputs.
So pressing PFL for fader 1 will take you to the input setup menu for AES 1, pressing PFL for fader 2 will take you to the setup menu for AES 2, fader 3 for AES2 and 4 for AES 4.
The AES setup menu has the same parameters the analog setup menu has with the exception of the input type option.

# Headphone Setup




Left Ear

Right Ear

**Check** the **E**nable box to include this monitor configuration while cycling through the HP

## Setting up your Headphone

There are 10 individual Headphone matrices available to store a monitor configuration consisting of any combination of the following:

- Card tracks (CARD)
- Output Buses (OUT)
- Camera Returns (RETURN)

**To set up your headphone selects:**

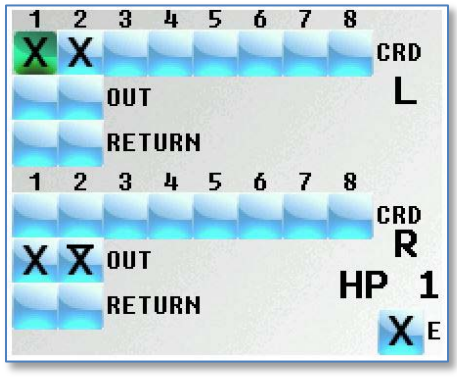
1. To access the headphone setup matrix - simultaneously press **MENU** knob and **HEADPHONE** knob.
2. While in the matrix, scroll the **MENU** knob to highlight the cross-point you want to choose. (**L** selections are sent to the Left ear and **R** selections are sent to the Right ear)
3. Press the **MENU** knob to put an **X** in the matrix.
4. Select the **E** to enable that setup to be active when toggling through while listening.
5. Press the **Headphone** knob to advance to the next matrix.
6. To exit, press and hold the **HEADPHONE** knob.
7. You can also add a custom name to each setup. Go to the **ENG Setup page** and select **MONITOR NAMES**

**NOTE:** To add the optional phase invert - press the **STAR** key. Then by pressing the **MENU** knob, you will be able to cycle through the selections with phase invert.

Power cycling the unit will reset it to NO INVERSION mode but keep your phase invert choice.

**Headphone matrix setup to decode MS stereo:**

The following is the proper setting for M-S headphone decoding. This example uses card track 1 as the Mid and track 2 for the side:

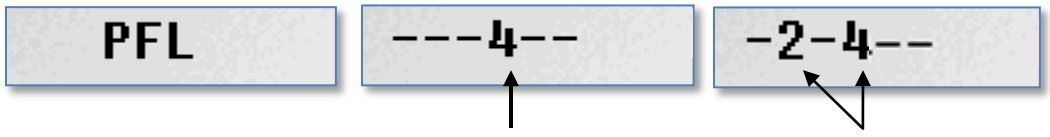


# Pre Fader Listen

## Listening to Inputs

Pressing the **PFL** keys puts Maxx into Pre Fader Listen mode. The PFL will follow the fader assignment. Once one of the **PFL** keys is pressed, the name in the Headphone Monitor field is replaced with **PFL** alternating with the selected channel number(s) that you are monitoring.

To change the feed press the channel number PFL keys you want to listen to. If you press and hold a second key that channel is added to the PFL.




**Listening** to Input **4** only

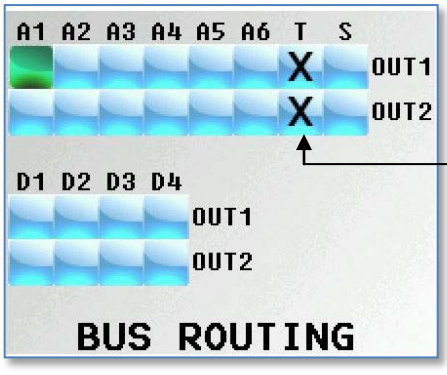
**Listening** to Inputs **2**, 4 simultaneously

To go back to normal listening press the **HEADPHONE** knob.

# Setting Up and Engaging Tone

## Assigning Tone to Output Busses

To assign tone to an output bus, press the **Bus** key and go to the **OUTPUT BUS ASSGN** matrix to select which output bus will receive tone.

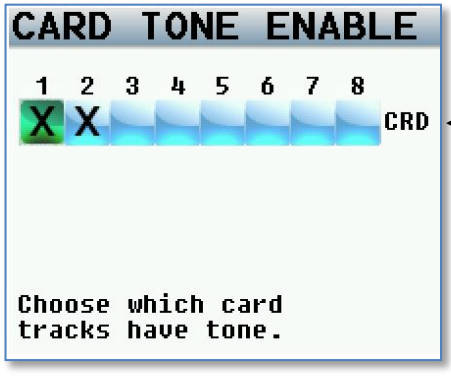



Shows that Output Busses 1, 2 will output Tone when Tone is engaged.

**NOTE**: Only the busses with tone routed to it will output the slate tone when the Visual Timecode Slate tone is activated

## Assigning Tone to Card Tracks

To assign tone to card tracks, press the **Bus** key and go to the **TONE ENABLE** matrix to select which card tracks will receive tone.




Shows that Card Tracks 1 and 2 will record Tone when Tone is engaged.

## Adjusting Tone

Tone level and frequency can be adjusted in the **ENG SETUP** menu.

Adjusts Tone Frequency

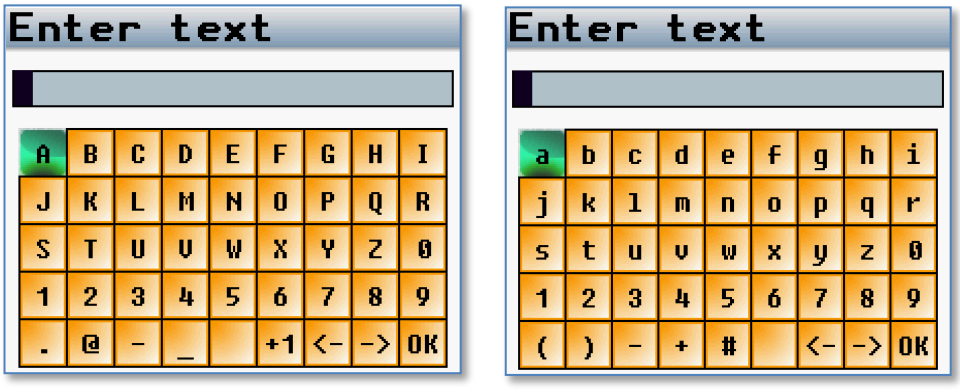
Adjusts Tone Level

## Engaging Tone

To toggle tone generation on / off, press and hold the **TONE** key on the face of Maxx.

# Enter Text

This menu allows alphanumeric data entry for all parameters that require data input.

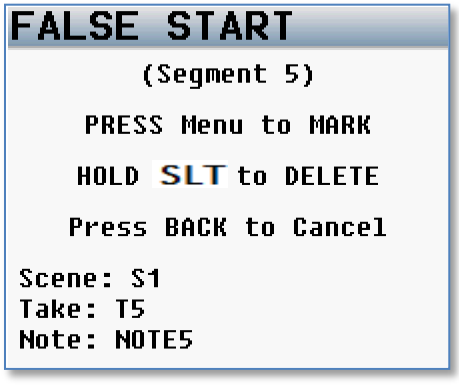



- To enter a character, turn the **MENU** knob until the character is highlighted and then press the **MENU** knob to select it.
- Rotate the **MENU** knob will cause the highlight to move right and left (this will also wrap around to the next line).
- Press and rotate the **MENU** knob will cause the highlight to move up and down.
- Press the **MENU** knob for 1 second to toggle between Upper and Lower case letters.
- After you are finished to enter the data press and hold the **HEADPHONE** knob for 1 Second or click the **OK** button.

**NOTE:** If you are inputting the **SCENE** or **TAKE** metadata, you can press the **+1** to increment the displayed value.

## False Start

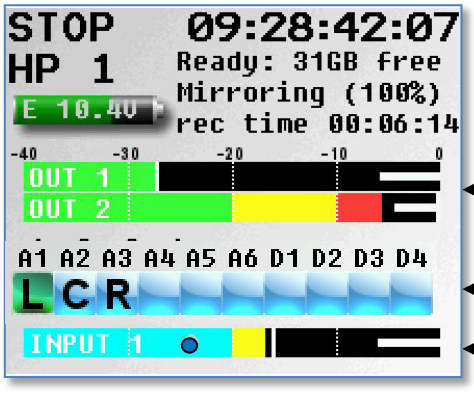
Pressing the **STOP** key a second time after can mark a Take as a False Start or just delete it.
After you press **STOP**, if you press and hold the **STOP** key for 1 second, the **False Start page** will be displayed.
Pressing Menu will mark the file. And if you hold the SLATE key will delete the file



# ENG /EFP Bag Operation

This Mode was created to aid in mixing and recording when in a "run and gun" situation.

This mode makes panning and mixing all inputs easily accessible right from the ***ENG Home screen***.




Shown In the ENG Home page:

- Routing matrix where you can "pan" analog inputs 1-6 and 4 AES input (with AES option installed). You can pan to **L** (left), **R** (right) or **C** (center).
- Output busses 1 and 2 (Left / Right) meters.
- Input meter that follows the AutoTrim™ function.

## ENG Panning

ENG pan routing is essentially a shortcut to the **Output Bus Assign** matrix – it will route post-fade analog inputs to the outputs busses. When you make a change in the **Pan Routing Matrix**, it actually adjusts the routing in the **Output Bus Assign** matrix.

### To Operate

In the **ENG Home Screen**, press the **BUS** key to enter the PAN routing matrix (the pan matrix will be highlighted). Rotate the **MENU** knob to select the input you want to PAN. Pressing the **MENU** knob will cycle the assignment as **L**, **C** and **R** to each input pair that was selected.
If you set **Prevent Empty Pan** to **ON** in the **Advanced** menu you remove the blank option, leaving only **L, C, R**.

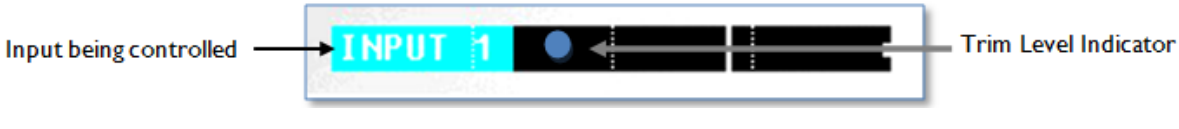
## AutoTrim™

AutoTrim™ eliminates the need for a separate hardware trim knob for each analog input. AutoTrim™ can be enabled in the **Mode** menu.

When it is enabled and a fader is "touched", two things come into play:

- The blue LED next to the fader illuminates to indicate that channel is active for AutoTrim™.
- The **MENU** knob then functions as the input trim for that channel. Turning the **MENU** knob adjusts the trim level for that input and indicates it with a trim indicated displayed in the meter.

**Trim Meter**




**NOTE:** The trim indicator's position does not relate to a specific value. It is used for relative adjustment only.

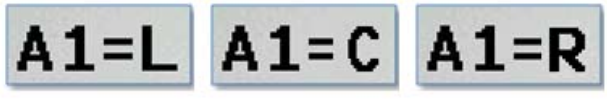
## AutoPan

AutoPan eliminates the need for a separate hardware pan key for each input. AutoPan can be enabled in the **Mode** menu.

When it is enabled and a fader is “touched”, two things come into play:

- The blue LED next to the fader illuminates to indicate that channel is active for AutoPan.
- The **Power** key then functions as the pan for that channel. Pressing the **Power** key adjusts the panning for that input
- Pressing the **Power Key** the panning for the illuminated channel will cycle from Left to Center to Right to Blank - unless “Prevent Empty Pan” in the ENG > Advanced menu is turned ON then the blank option will not be cycled through.
- To AutoPan inputs 5 and 6 you need to be in the ENG meter screen and have VFade mode set to ON. Then when the input trim meter is visable for that input then the Power Key will pan that input.

As you AutoPan the headphone display will temporally show which input is panned to which position.




**Analog input 1 panned Left, Center, Right**

# Media Recommendations

## Compact Flash Cards

Currently there aren't any cards that we are aware of that don't work with Maxx. Though we recommend SanDisk and Transcend cards, it is not necessary to use cards with "double write speed" features. Any cards, 4 – 64 GB, should be fine. Also 133X cards are fine - a faster card will not make Maxx write any faster - the only advantage of a faster card is faster downloads. Do not use cards from questionable manufacturers or buy from questionable sources. Counterfeit cards do exist and can be unreliable and cause crashing.

If you are planning to record at 192 kHz, choose a card that claims 10 MB per second SUSTAINED write speed (MAX write speed does NOT count).

Once you have the cards in hand, even if it is a brand/size that you have used in the past, test the cards ability to keep up with the recording process before you take it out in the field. If the unit kicks out of record or causes a crash it is most likely a result of bad media.

# Syncing Maxx to a Denecke Slate

The LTC stream out of Maxx has a "jitter" in the TC signal at 29.97 fps and 23.976 fps. This can result in the Denecke TS-C or the TS-3 slates identifying the wrong code, if you set the slate to "Auto Set" (position 5). In addition, if you use "Auto Set" you will experience a TC drift.

You don't need to replace your slates. The Denecke Slate and Maxx can sync perfectly.

When setting the slate to receive timecode at 29.97 or 23.976, **DO NOT USE** the auto set. Just simply set the rotary dial to the corresponding TC frame rate. When you sync the slate you will see "Sync Err" message in the slate. Simply ignore it. The slate will accept the sync and the slate and Maxx will stay in perfect sync with each other.

# Connector Pin Assignments

### Audio Input / Output Connectors (XLR-3)

| XLR - 3 | Signal |
|---|---|
| PIN 1 → | GROUND |
| PIN 2 → | SIGNAL + |
| PIN 3 → | SIGNAL – |

**Tape / Mono Out -** Uses a Switchcraft TA5-F
These outputs are assigned in the Bus routing Menu

| Tape / Mono Out of Maxx | |
|---|---|
| PIN 1 → | GROUND |
| PIN 2 → | MONO SIGNAL + |
| PIN 3 → | MONO SIGNAL – |
| PIN 4 → | TAPE SIGNAL + |
| PIN 5 → | TAPE SIGNAL – |

**Return / Audio Inputs 5 and 6 -** Uses a Switchcraft TA5-F
The return can be wired to receive 2 mono returns from 2 cameras or one "stereo" return from one camera.

| Return into Maxx | |
|---|---|
| GROUND → | PIN 1 |
| SIGNAL + Return 1 → | PIN 2 |
| SIGNAL – Return 1 → | PIN 3 |
| SIGNAL + Return 2 → | PIN 4 |
| SIGNAL – Return 2 → | PIN 5 |

**12 Volt DC power -**Uses Hirose HR10A-7P-4P

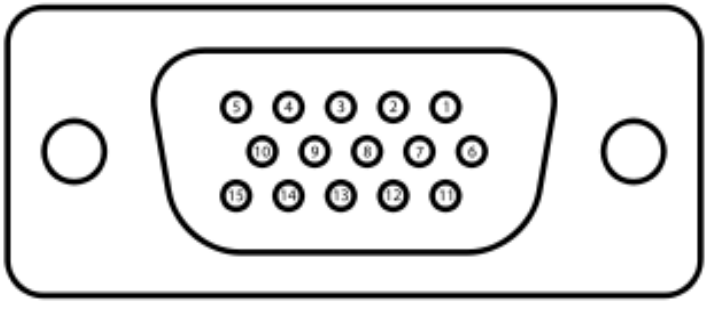
| DC Power In | |
|---|---|
| PIN 1 → | GROUND – |
| PIN 2 → | N/C |
| PIN 3 → | N/C |
| PIN 4 → | SIGNAL + |

## Headphone

| 1/4 Headphone | |
|---|---|
| SIGNAL LEFT | TIP |
| SIGNAL RIGHT | RING |
| GROUND | SLEEVE |

## AES Digital Input / Output Connectors (DB-15)

Maxx uses a mini DB-15 (AKA: DE-15) connector for the AES Digital input and output connectors.




Top row pins: 5, 4, 3, 2, 1
Middle row pins: 10, 9, 8, 7, 6
Bottom row pins: 15, 14, 13, 12, 11

| DB -15 Pin Number | IN / OUT | AES PAIRS | Connects to XLR Pin |
|---|---|---|---|
| 1 | IN | 3 / 4 | 2 (+) |
| 2 | IN | 1 / 2 | 2 (+) |
| 3 | MIX BUS OUT | L / R | 2 (+) |
| 4 | GP OUT | ------- | ------- |
| 5 | LINK IN | 5 / 6 | 2 (+) |
| 6 | OUT | 1 / 2 | 3 (--) |
| 7 | OUT | 1 / 2 | 2 (+) |
| 8 | GROUND | GROUND | 1 |
| 9 | OUT | 3 / 4 | 3 (--) |
| 10 | OUT | 3 / 4 | 2 (+) |
| 11 | IN | 3 / 4 | 3 (--) |
| 12 | IN | 1 / 2 | 3 (--) |
| 13 | MIX BUS OUT | L / R | 3 (--) |
| 14 | GP IN | ------- | ------- |
| 15 | LINK IN | 5 / 6 | 3 (--) |

# Updating Firmware

Each Maxx is shipped with the latest firmware version installed. When newer firmware becomes available, it can be downloaded from the Zaxcom website: ***http://www.zaxcom.com/software-updates***

Newer version of Beta software may be found on the Zaxcom Forums: ***http://www.zaxcom.com/forum***

## Upgrading the Firmware

1. Using a PC or Mac format a compact flash card then download the new software and copy it to the card.
2. Insure that a set of fully charged batteries are installed or a stable power supply is connected.
3. With Maxx powered down, insert the CF card containing the .bin file into the card slot. Make sure only one .bin file is on the card.
4. Press and hold the **STAR** key while turning on Maxx.
5. Once the "Preparing to burn ROM" line is displayed, you can release the **STAR** *key*.
6. After "Press PWR key to power down" is displayed, cycle the power.
7. Verify that Maxx is running the version you just installed in the **About Maxx Page**.
8. After updating the software, it is generally advised to perform a Restore to Factory Defaults.

**NOTE:** With some updates, it is required to do a Restore to Factory Defaults – if that is the case, you will be informed to do so in the release notes supplied with the firmware.

# Product Support

| | |
|---|---|
| **Register** your Maxx with Zaxcom: | ***http://www.zaxcom.com/product-registration*** |
| Download the latest **Firmware** from: | ***http://www.zaxcom.com/software-updates*** |
| Download the latest **User Manuals** from: | ***http://www.zaxcom.com/instruction-manuals*** |
| **Submit Technical Questions** at: | ***http://www.zaxcom.com/submit-a-technical-question*** |
| Submit information for **Repair Services** at: | ***http://www.zaxcom.com/repairs*** |
| Join the **Zaxcom Forum** at: | ***http://www.zaxcom.com/forum*** |

# Maxx Specifications

**Analog In**
Analog inputs: 4 Mic/line-level with 48V phantom power and 2 Line level / camera returns
Connector: 4 x XLR-3F (2 with .25" jack)
Mic level input range: -56 to -26 dBu
Line level input range: -10 to +8 dB
Distortion: 0.0015%
ADC bit-depth: 24 bits
Dual ADC input dynamic range: 137 dB with NeverClip™
Clipping level: +28 dBu
Frequency response: 28* Hz to 22 kHz (48 kHz sampling-rate)
THD + noise: 0.0015%
*Serial #10107 and above, prior to this 50 HZ – 22 kHz

**Analog Out**
Analog outputs: 2 Balanced XLR, 0dBu, -10dBu and -35dBu
1 Balanced TA5 (2 bus) 0dBu, -10dBu and -35dBu
Tape/mono output: 2 balanced TA5
Headphone 1: 1/4 inch stereo bus
Output level: 0 dBu @ -20 dBFS
Clipping level: +20 dBu
DAC Bit-depth: 24 Bits
DAC Dynamic Range: 115dB
Impedance: 30 ohm

**Digital In/Out -** *Input is optional*
Channel count: 2 AES or AES42 pairs (4 channels)
Connector: DB-15 mini (DE-15)
Source: Mix/Direct
Sample rate conversion: 32-192 KHz

**Transmitter** - *optional*
Power Output: 10 / 50 / 100 mW – Software Selectable
RF Modulation: Proprietary Digital Method
RF Frequency Range: 518.0 to 850.0 MHz (Typical Blocks are 24 MHz wide)
RF Frequency Step: 100 KHz
RF Bandwidth: 200 KHz
Channel Separation: 500 KHz (700 KHz recommended)
Antenna Connector: 50 Ω SMA Female
Emission Designator: 180 KV2E
FCC Part: 75.861

**Misc.**
Display: Full color sunlight readable LCD
Meters: Output / Input / Card
Slate Mic: Internal

**Recording**
Track count: 8 tracks
Bit-depth (primary card): 24 bits
Bit-depth (mirror card): 16 / 24 bits
Sample rates (kHz): 44.1, 47.952, 48, 48.048, 96,192
Head room: 20 to 44 dB
Format: MARF II, .BWF
Max Pre-record duration: 5 seconds

**Data Storage**
Internal: Compact Flash
External: NoneInternal Mixer
Mixer Type: 32 bit floating point DSP
Mixer Cross Point: 8 input x 4 output (Pre-fader / Post-fader / Phase Inversion)
A-D / D-A resolution: 24 bit
Head room: Selectable 12 to 20 dB

**Effects**
Delay: 0 to 60 mS in .1mS steps
Notch filter: 2 band, 20 Hz to 20 kHz frequency range adjustable
Compressor type: soft knee with side chain
High Pass Filter: 20 Hz to 230 Hz

**Timecode Reader/Generator**
Timecode type: SMPTE
Connector: BNC
Input Voltage: 1-4VPP
Output Voltage: 2VPP
Clock Accuracy: 1.54 PPM (1 frame out in 6 hours)
Timecode Frame-rates: 23.98, 24, 25, 29.97NDF, 29.97DF, 30NDF, 30DF

**Power**
Internal: 6AA 7-9 VDC, 4 hours of usage (NiMH)
External: 8 to 18 VDC
Power Connecter: Hirose
Battery Meter: Yes, on LCD display

**Physical**
Size (H x W x D) 2.0" x 7.5" x 5.25"
Weight: 2.5 pounds

# Zaxcom Warranty Policy and Limitations

No limited warranty is provided by Zaxcom unless your Zaxcom Maxx ("Product") was purchased from an authorized distributer or authorized reseller. Distributers may sell Products to resellers who then sell Products to end users. Please see below for warranty information or obtaining service. No warranty service is provided unless the product is returned to Zaxcom Inc. or a Zaxcom dealer in the region where the Product was first shipped by Zaxcom.

## Warranty Policy

The Product carries a Standard Warranty Period of one (1) year.

**NOTE:** The warranty period commences from the date of delivery from the Zaxcom dealer or reseller to the end user.

There are no warranties which extend beyond the face of the Zaxcom limited warranty. Zaxcom disclaims all other warranties, express or implied, regarding the Products, including any implied warranties of merchantability, fitness for a particular purpose or non-infringement. In the United States, some laws do not allow the exclusion of the implied warranties.

## Troubleshooting & Repair Services

No Product should be returned to Zaxcom without first going through some basic troubleshooting steps with the dealer you purchased your gear from.

To return a product for repair service, go to the Zaxcom Repair Services page (***http://www.zaxcom.com/repairs***) and fill in your information; there is no need to call the factory for an RMA. Then send your item(s) securely packed (in the original packaging or a suitable substitute) to the address that was returned on the Repair Services page. Insure the package, as we cannot be held responsible for what the shipper does.

Zaxcom will return the warranty repaired item(s) via two-day delivery within the United States at their discretion. If overnight service is required, a FedEx or UPS account number must be provided to Zaxcom to cover the shipping charges.

*Please note, a great resource to troubleshoot your gear is the Zaxcom Forum: ***http://www.zaxcom.com/forum***.

## Warranty Limitations

Zaxcom's limited warranty provides that, subject to the following limitations, each Product will be free from defects in material and workmanship and will conform to Zaxcom's specification for the particular Product.

## Limitation of Remedies

Your exclusive remedy for any defective Product is limited to the repair or replacement of the defective Product.

Zaxcom may elect which remedy or combination of remedies to provide in its sole discretion. Zaxcom shall have a reasonable time after determining that a defective Product exists to repair or replace a defective Product. Zaxcom's replacement Product under its limited warranty will be manufactured from new and serviceable used parts. Zaxcom's warranty applies to repaired or replaced Products for the balance of the applicable period of the original warranty or thirty days from the date of shipment of a repaired or replaced Product, whichever is longer.

## Limitation of Damages

Zaxcom's entire liability for any defective Product shall, in no event, exceed the purchase price for the defective Product. This limitation applies even if Zaxcom cannot or does not repair or replace any defective Product and your exclusive remedy fails of its essential purpose.

## No Consequential or Other Damages

Zaxcom has no liability for general, consequential, incidental or special damages. These include loss of recorded data, the cost of recovery of lost data, lost profits and the cost of the installation or removal of any Products, the installation of replacement Products, and any inspection, testing or redesign caused by any defect or by the repair or replacement of Products arising from a defect in any Product.

In the United States, some states do not allow exclusion or limitation of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

## Your Use of the Product

Zaxcom will have no liability for any Product returned if Zaxcom determines that:

- The Product was stolen.
- The asserted defect:
  1. Is not present,
  2. Cannot reasonably be fixed because of damage occurring when the Product is in the possession of someone other than Zaxcom, or
  3. Is attributable to misuse, water damage, improper installation, alteration, including removing or obliterating labels and opening or removing external covers (unless authorized to do so by Zaxcom or an authorized Service Center), accident or mishandling while in the possession of someone other than Zaxcom.
- The Product was not sold to you as new.
- Non Zaxcom supplied parts and/or modifications were installed.

## Additional Limitations on Warranty

Zaxcom's warranty does not cover products, which have been received improperly packaged, altered or physically abused.